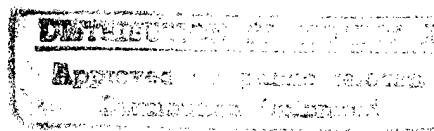


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13 September 1984



# USSR Report

AGRICULTURE

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13 September 1984

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AGRICULTURE**

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MAJOR CROP PROGRESS AND WEATHER REPORTING

TENDING SUGAR BEET CROPS IN BELGOROD, KURSK, OREL OBLASTS.

Moscow SEL'SKAYA ZHIZN' in Russian 3 Jun 84 p 1

Article by A. Trubnikov, Kursk: "Taking the Situation Into Account"

Text The beet fields occupy more than 400,000 hectares in Belgorod, Kursk and Orel oblasts. And fine seedlings have been obtained on almost this entire area. Today the fate of the crop rests with the quality of the tending of the plants and with the formation of the density of the sowings.

Prior to going out onto the beet fields, the 1st secretary of the Shchigrovskiy Rayon CPSU Committee V.P. Burchik decided to visit the chemical station of the raysel'khozhimiya. The concrete take-off strip was empty -- both aircraft had flown off to treat the crops and the next batch of toxic chemicals was being prepared in the mixture. One spraying machine after another approached. Their tanks were rapidly filled with solution and thereafter they departed for neighboring fields. Thereafter a motor vehicle with a tank installed upon it arrived for the purpose of being filled up -- it was supplied with solution that would be utilized by spraying units operating on distant tracts. The machine operators of this special detachment, created on the basis of a decision handed down by the RAPO rayon agroindustrial association council, are carrying out their tasks in a rapid and successful manner.

Following his visit to the chemical stations at the Kolkhoz imeni N. Ostrovskiy and the Zavet Il'icha Sovkhoz, Vladimir Panteleyevich Burchik stated:

"One feature of this present spring season is the attack being carried out on the pests out on the beet plantations -- fleas and beet pests. They have been repelled in all areas."

This was largely the result of work performed by the plant protection station and its forecasting station. They directed the work not only of a detachment of Sel'khozhimiya but also subunits created on the farms. Many tracts of land were treated several times.

At the present time, all of the efforts of the beet growers are being directed towards completing the formation of the crop density as rapidly as possible. Heavy reliance is being made upon the mechanisms. Two-stage pre-seedling harrowing and blind cultivation have promoted the destruction of weeds and, to

a certain degree, the removal of excess plants. The specialists determined the most efficient method for thinning out each field while the women carry out checks on the crops. Such was the picture we observed at the Kolkhoz imeni Kalinin. At the kolkhozes imeni Mayakovskiy and imeni N. Ostrovskiy, where the plants are more dense, the machine operators pull out clumps of plants. Each day the female kolkhoz workers gather up the clumps from almost one third of a hectare each.

The raysel'khozupravleniye has been informed that the work rates being followed are making it possible to complete the thinning out work during the best periods. The crops are being thinned out rapidly in Korenevskiy, Oboyanskiy and Oktyabrskiy rayons. The beet growers on a number of farms and also the non-schedule teams have already completely formed their planting density, they are loosening the inter-row spacings and they are applying a top dressing to the crops.

The Belgorod beet growers are carrying out their work taking into account the existing situation. They completed their sowing work in a high quality manner and they are carrying out the follow-up complex of operations associated with the tending of the beet plantations during the best periods.

A number of farms in Valuyskiy Rayon have commenced blind cultivation without waiting for the complete appearance of the seedlings. The cultivators were sent out in a direction such that the sun would be behind the backs of the machine operators, thus making the drill rows more visible. Combined with pre-seedling harrowing and packing of the soil, this promoted better moisture retention in the soil, the destruction of weeds and it accelerated and facilitated the work of forming the density of the plantings.

The beet growers in Shebekinskiy Rayon are employing a moisture-retention technology. For inter-row tilling, they are using units having a complicated set of working organs -- protective disks, needle-shaped rollers and special blades welded to the panel assembly which make it possible to reduce considerably the protected zone. A specific thinning out and inter-row tilling technology has been defined for each field and various methods are being employed for carrying out the thinning work. Cultivators and also row thinning units have been included in the work.

We visited the third production sector accompanied by the chairman of the Rossiya Kolkhoz V.N. Yenin. The machine operators and beet growers had already departed a field 114 hectares in area. An optimum number of plants had been left on each hectare.

"The field looks very good and yet a great amount of labor was required in order for it to appear this way," stated the sector's agronomist V.Ye. Yenin.

The kolkhozes and sovkhozes in Belgorodskiy, Ivnyanskiy, Chernyanskiy and Raktyanskiy rayons are carrying out their thinning work in a successful manner.

A special 10-day period has been designated in Orel Oblast for tending the sugar beet crops. Hundreds of cultivators and thinning units were supplied for forming the plantations and thousands of representatives from industrial

enterprises and organizations were furnishing assistance in picking up the clumps of plants. The most coordinated work was carried out at kolkhozes and sovkhozes in Livenskiy Rayon. Here an increase was observed in the rates for thinning out and picking up the clumps of plants. The non-schedule team of D.I. Borodin at the Kolkhoz imeni Karl Marks was the first to complete this work. The beet growers in Pokrovskiy, Dolzhanskiy, Orlovskiy, Dmitrovskiy and Kromskiy rayons were among the leaders in the competition.

However, the good news was also accompanied by news of an alarming nature. In some areas the fields were being treated with chemicals on an untimely basis and sparse stands of crops were being tolerated. Such incidents took place on farms in Alekseyevskiy Rayon in Belgorod Oblast, Belovskiy Rayon in Kursk Oblast and in Maloarkhangelskiy Rayon in Orel Oblast. Many farms are still failing to observe the optimum periods for forming the planting densities and for carrying out other operations. Top dressings are being applied in a very weak manner. The quality of the thinning out work is low owing to insufficient control being exercised by the specialists.

At the present time as never before, importance is being attached to relying upon the experience of leading workers and carrying out the urgent work on the plantations in a timely and high quality manner. This is a matter of honor for all of the beet growers.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SUGAR BEET SOWING COMPLETED IN KUBAN REGION

Moscow SOVETSKAYA ROSSIYA in Russian 19 Apr 84 p 1

/Article by V. Mokrotovarov, Krasnodar Kray: "In A Tense Rhythm" /

/Excerpts/ The sowing of sugar beets is being completed in the Kuban. The farmers have been allocated 200,000 hectares for their plantations. Five hundred non-schedule teams will be responsible for growing the sweet roots.

For the 4th year of the five-year plan, the Kuban farmers resolved to obtain 330 quintals of roots from each hectare. The machine operators commenced their harvest campaign long before the sowing work. The principal tracts of autumn plowed land were prepared by means of improved bastard fallow tilling of the soil. Roughly 28 tons of organic and 225 kilograms of mineral fertilizer were applied to each hectare.

This present spring period turned out to be a difficult one. At the present time, the moisture supplies in the soil in some regions are lower than the indicators established over a period of many years. Thus the periods for preparing the soil and carrying out the sowing work had to be shortened to the maximum possible degree.

"Our machine operators were not accustomed to the caprices of nature," stated the chief agronomist at the Kolkhoz imeni Kirov, N.D. Barsukov, "We introduced corrections into the sowing schedule and we carried out a thorough inspection of all of the fields."

The machine operators are not allowing any pause to take place between the tilling of the soil and the sowing. A strict accounting is being kept of each moment of time. This year the farm's beet growers are employing the industrial technology as an ally: the sugar beet plantations being cultivated without the use of manual labor have been increased in size by a factor of 10.

The Kuban beet growers are convinced on the basis of experience that a delay of just 5-7 days in carrying out the sowing will bring about a reduction in the sugar content of the roots and a shortfall in the crop.

A notable feature of this present sowing period is the mass use of the regionalized SKO-42 variety. It was developed by plant breeders at the North Caucasus Branch of the All-Union Scientific-Research Institute of Beet

Production and it has undergone extensive testing on the fields of the brigade headed by the eminent farmer M.I. Klepikov at the Kuban' Kolkhoz in Ust'-Labinskiy Rayon. This new inhabitant of the beet plantations furnished more than 75 quintals of sugar per hectare.

"More than 20 years were spent developing this variety" stated one of the authors of SKO-42, A.V. Zubtsov, "A high single-seed nature was achieved. It amounts to 95-97 percent. For all practical purposes, a hoe is not required for thinning out the seedlings on the fields. Importance is attached only to ensuring that the agricultural technique is not oversimplified.

The machine operators in many rayons throughout the kray have displayed a high level of organization. After completing their sowing work, they commenced tending the plantations. At the present time, the pre-seedling harrowing of the sugar beet crops is unfolding. All of the work is being carried out in a manner so as to retain the moisture supplies in the soil and in the interest of creating optimum conditions for the development of the plants.

Generally speaking the kray's beet growers are devoting special attention to the quality of their work. The mechanized detachments and teams have undergone retraining by taking agrotechnical courses and watching television broadcasts from the Kuban School for Farmers. In addition, they are maintaining constant contacts with the scientists and specialists. Quality stations are in operation in all areas. In short, everything is being done to ensure that high yields are obtained and that the processing enterprises are supplied with more than 6 million tons of sugar beets.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

WARM SUNNY WEATHER--Krasnodar Kray--The Kuban region is finally experiencing some warm sunny weather. The machine operators have moved their sowing units out onto the beet fields, an area of 200,000 hectares. Rapid and steady work is being carried out both day and night. The rates and quality of this work are considerably higher than those for past years. /by V. Udachin/ /Excerpt/ /Moscow SOVETSKAYA ROSSIYA in Russian 4 Apr 84 p 1/ 7026

SOWING OPERATIONS COMMENCE--Krasnodar--The farmers in the Kuban have commenced sowing their sugar beets. /Text/ /Moscow TRUD in Russian 30 Mar 84 p 1/ 7026

COLLECTIVE CONTRACT WORK--The sowing of sugar beets has commenced on farms in Kursk Oblast. Here the beet plantations occupy approximately 200,000 hectares. More than one half of them will be cultivated using a progressive technology -- with practically no expenditures of manual labor. The mechanized detachments are converting over to the collective contract method, the advantages of which were proven last year by the leading beet growers at the Zarya Kommunizma Kolkhoz in Korenevskiy Rayon, who obtained 568 quintals of sugar beets per hectare. In order to make maximum use of the moisture supplies in the soil, the Kursk farmers are striving to complete their beet sowing work in just 2-3 days. /Text/ /Moscow PRAVDA in Russian 16 Apr 84 p 3/ 7026

INDUSTRIAL TECHNOLOGY--Kursk, 15 May--The green seedlings on all 190,000 hectares of the beet plantations in Kursk Oblast stand out almost as lines on a ruler. The tending of the crops has commenced on the farms. More than one half of the areas is being worked using the industrial technology. Simultaneously with thinning out the seedlings, the machine operators are loosening the inter-row spacings and applying a top dressing to the plants. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 May 84 p 1/ 7026

HIGH WORK RATES--Kursk, 22 May--The majority of the oblast's farms have completed their first loosening of the inter-row spacings for the sugar beets and have commenced forming the plant density. This work is being carried out at high rates in Cheremisinovskiy, Sovetskiy, Bol'shesoldatskiy and a number of other rayons. The industrial technology is being employed on more than one half of the area. The thinning out work is being carried out here using the mechanized method and at times the thinning out process is replaced by an inspection of the sowings. Extensive use is also being made of row thinning units and cultivators on the remaining tracts, as a result of which the labor productivity of the beet growers has increased sharply. The beet growers are

receiving assistance from the city-dwellers. /By A. Trubnikov/ /Text/  
/Moscow SEL'SKAYA ZHIZN' in Russian 23 May 84 p 1/ 7026

SOWING UNITS AT WORK--The sowing units have been moved out onto the beet fields in Orel Oblast. And these fields are the largest in the nonchernozem zone -- commencing with the spring of this year, use will be made of the collective contract method. In Orel Oblast the beets occupy more than 60,000 hectares of the best land. /Text/ /Moscow PRAVDA in Russian 17 Apr 84 p 1/ 7026

BEET SOWING COMPLETED--Belgorod, 23 Apr--Use of the industrial technology for sugar beet cultivation enabled the farmers in Belgorod Oblast to achieve high rates and high quality work in the sowing of this crop. They completed their sowing work out on the beet fields in just 6 working days and in a high quality manner. They were able to achieve this as a result of the efficient organization of the work of non-schedule brigades and teams and also because these brigades and teams were supplied with seed and fertilizer in a timely manner. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 24 Apr 84 p 1/ 7026

PLANT DENSITY WORK COMPLETED--Belgorod--The farmers in Borisovskiy Rayon in Belgorod Oblast have established a reliable foundation for the sugar beet harvest. They have completed forming the density for the plants on the entire area sown. For the oblast as a whole, this agricultural method was carried out on more than two thirds of all of the areas. At the present time, a top dressing is being applied to the sugar beets in all areas, with the inter-row spacings being loosened simultaneously. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 31 May 84 p 1/ 7026

INTENSIVE PLANT DEVELOPMENT--Belgorod, 5 Jun--The farmers in Belgorod Oblast have completed forming the plant density on the entire area sown in sugar beets. This crop is now being cultivated using mainly the industrial technology. Non-schedule mechanized teams have commenced the deep loosening of the inter-row spacings while simultaneously applying a top dressing of liquid nitrogen fertilizer to the plants. This agricultural method ensures the intensive development of the plants and furnishes an additional increase in yield of up to 50 quintals of roots per hectare. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 6 Jun 84 p 1/ 7026

A BUSY PERIOD--Lipetsk, 4 Jun--The present period is a busy one out on the oblast's beet and corn fields. The mechanized teams are conducting a tense campaign aimed at retaining the moisture in the soil. Top hoeing, or so-called "dry irrigation," the destruction of weeds, thinning out of the seedlings and strict observance of the technological discipline -- all of this is having a favorable effect on the condition of the crops. High work rates made it possible for the beet growers at the Kon'-Kolodezskiy Sovkhoz in Khlevenskiy Rayon to be the first in the rayon to complete the thinning out of their seedlings and to form the desired plant density. /By K. Alekseyev/ /Text/  
/Moscow SEL'SKAYA ZHIZN' in Russian 5 Jun 84 p 1/ 7026

WITHOUT LOSING TIME--Voronezh, 24 Apr--The sowing of early grain crops has been completed on the oblast's fields. Ammonia liquor and also complex fertilizers, applied to the rows, have been employed extensively on the farms. At the same time, the sowing of sugar beets on a mass scale has commenced, the rates of which are increasing with each passing day. The farms in Bobrovskiy, Kashirskiy,

Pavlovskiy, Anninskiy and Rossoshanskiy rayons are carrying out their sowing work in a better and more organized manner than those in other rayons. The beet growers at the kolkhozes Bol'shevik, Rassvet, 40 Let Oktyabrya and others in Kashirskiy Rayon completed their sowing work literally within a matter of hours. A typical feature of this present year is the high quality of the plantation cultivation work and the extensive introduction of the collective contract and the industrial technology. Refusing to tolerate any loss in time, the oblast's beet growers are now commencing to tend their crops. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 84 p 1/ 7026

LABOR-INTENSIVE PROCESSES MECHANIZED--Voronezh--Taking into account the peculiarities of the current spring period, the leading farms in Voronezh Oblast carried out their sowing work in just 40-50 hours. Beet Production in all areas is converting over to the industrial technology. The mechanization of all labor-intensive processes -- from sowing to harvesting the crop -- has opened up a broad path for organizing labor on the basis of the brigade contract method. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 26 Apr 84 p 1/ 7026

BEET SOWING COMMENCES--Barnaul--The sowing of beets has commenced in Altayskiy Rayon. On 15,000 hectares -- one half of the area allocated for this technical crop -- the cultivation of the sweet roots is being carried out using the industrial technology. Many farms are using highly productive varieties of local breeding and the issuing of wages based upon the final results has been introduced into operations. /Text/ /Moscow TRUD in Russian 18 May 84 p 1/ 7026

FLEA-BEETLE DAMAGE--In the Central-Chernozem Zone, the sowings of sugar beets, which here occupy more than 50 percent of the areas set aside for this crop in the Russian Federation, sustain considerable damage each year caused by flea-beetles. Other pests appear as centers of disease only during individual years and do not constitute any great danger. /By P.S. Rusinov, senior scientific workers at an experimental station of the Voronezh Agricultural Institute/ /Excerpt/ /Moscow ZASHCHITA RASTENIY in Russian No 5, May 83 p 24/ /COPYRIGHT: "Kolos", "Zashchita rasteniy", 1983/ 7026

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## LIVESTOCK FEED PROCUREMENT

### UKRAINIAN FEED PROCUREMENT PROGRESS REPORTS

#### Several Oblasts Behind Schedule in Meeting Targets

Kiev SIL'S'KI VISTI in Ukrainian 26 Jul 84 p 3

[Article, published under the heading "Agricultural Survey": "Increase Feed Supplies"]

[Text] Yesterday the UkrSSR Central Statistical Administration made public the figures on fulfillment of the Republic State Economic and Social Development Plan for the first half of this year. It is reported in particular that in animal husbandry meat production rose 9 percent in the public sector in comparison with the first half of last year, with milk showing a 5 percent increase and eggs a rise of 2 percent. These successes achieved by livestock farmers are to a significant degree the result of last year's shock-work labor by feed producers, who succeeded in putting aside good stocks of hay, haylage, silage, and other coarse and succulent feeds. How are they accumulating this year?

The year's hay procurement target has already been met by the farms in Kirovograd Oblast, and the haylage target has been met in Transcarpathian, Kiev, Kirovograd, Crimean, Nikolayev, Ternopol, and Khmelnitskiy oblasts. It is thanks to them that the total quantity of haylage put away this year is greater than last year, totaling 8.6 million tons or 79 percent of the targeted amount. A rapid pace is being maintained in the production of grass meal and other dried feeds in Poltava and Rovno oblasts. Recently figures on preparation of this feed have improved in Sumy Oblast.

Figured per standard head of stock (excluding swine and poultry), kolkhozes and state farms currently have an average of 4 quintals of feed units in coarse and succulent feeds. The greatest increase in the past week has been achieved in Donetsk, Transcarpathian, Zaporozhye, Ternopol, Kharkov, and Kherson oblasts, where almost 1 quintal of feed units has been laid up in these feeds. At the same time this indicator has increased by only 0.1-0.2 quintal of feed units on the farms of Vinnitsa and Chernovtsi oblasts.

Here is how preparation of coarse and succulent feeds is progressing in the oblast — in quintals of feed units per standard head of livestock (excluding swine and poultry):

Crimean	5.5
Transcarpathian	5.4
Rovno	5.2
Ternopol	5.2
Khmelnitskiy	5.0
Ivano-Frankovsk	4.9
Donetsk	4.7
Zaporozhye	4.5
Kherson	4.5
Kiev	4.4
Nikolayev	4.3
Volyn	4.2
Vinnitsa	4.1
Zhitomir	4.1
Kirovograd	4.1
Chernovtsy	4.1
Odessa	4.0
Lvov	3.9
Poltava	3.5
Dnepropetrovsk	3.3
Kharkov	3.1
Sumy	3.0
Cherkassy	2.8
Chernigov	2.7
Voroshilovgrad	2.5

A large number of farms which harvested grasses in a prompt and timely manner have commenced a second cutting and are continuing to increase their stocks of coarse and succulent feeds. Some kolkhozes and sovkhozes, however, have not yet first-cut harvested many thousands of hectares of planted and natural grasses. This is one of the reasons why less hay, grass meal and chop has been laid in than last year.

The kolkhozes and sovkhozes of Zhitomir, Kiev, Chernigov, and certain other oblasts are lagging substantially behind last year's hay figures. In Transcarpathian and Chernigov oblasts, output of dehydrated feed preparation units has not exceeded 40 tons since the beginning of the season, a figure which is half the republic average and from one fourth to one third the figure achieved in Poltava and Rovno oblasts. Organization of drying equipment operation must also be substantially improved in Nikolayev, Kherson, and Cherkassy oblasts.

Preparation of coarse and succulent feeds is entering a decisive phase. It is therefore essential to mobilize all reserve potential to ensure a full supply of these feeds to livestock units and complexes.

## Tapping of All Fodder Sources Urged

Kiev SIL'S'KI VISTI in Ukrainian 9 Aug 84 p 3

[Article, published under the heading "Agricultural Survey": "Utilize All Feed Sources"; passages rendered in all capital letters printed in boldface in source]

[Text] According to UkrSSR Central Statistical Administration figures, as of 6 August kolkhozes, sovkhozes, interfarm enterprises and other state-run operations have achieved the following production figures: 4.9 million tons of hay, or 69 percent of target; 9.2 million tons of haylage, half a million more than as of this date last year; 7.3 million tons of bulk silage, 11.7 million tons of stacked straw, and 733,000 tons of grass meal.

Figures for the last week on procuring and laying in feed will be considerably higher than those for last year. Hay production is up 164,000 tons, haylage is up 122,000 tons, straw is up 2.2 million tons, and grass meal is up 18,000 tons. The pace of ensilaging is increasing.

Agricultural workers in Kirovograd Oblast, who have already overfulfilled the hay and haylage production plan, are conducting fodder harvesting in an organized manner. The kolkhozes and sovkhozes of Volyn and Odessa oblasts are close to meeting targets pertaining to laying in hay stocks.

This year haylage is a particular concern. This feed is not only nutritious but also economically advantageous. In comparison with other methods of handling grasses, preparing haylage is considerably less costly and increases yield of feed units per hectare. It is therefore not surprising that a number of farms are preparing more haylage than last year, and nine oblasts are amassing this valuable feed above target.

Feed producers on the Kolkhoz imeni Lenin in Borodyanskiy Rayon, Kiev Oblast, are persistently seeking reserve potential for increasing fodder stocks. The feed production detachment on this kolkhoz is headed by kolkhoz deputy chairman B. M. Batov. Thanks to precise organization of labor and employment of techniques in relation to weather condition, the farm has amassed more than 1 ton of hay per cow, half of which has been finish-dried by the active ventilation method. The detachment is completing haylage preparation plan fulfillment. The target for harvesting grasses from crop-unsuitable acreage has been exceeded by 50 percent. Feed crop stands are in good condition. The green conveyer is functioning smoothly.

In a number of oblasts, however, feed production is proceeding at a slow pace. On the farms of Chernigov Oblast only 52 percent of the hay production target has been met, 35 percent for haylage, and 40 percent for grass meal and other desiccated feeds. A large contributing factor is the delayed readying of feed harvesting equipment for field operations. Every day approximately 300 mowing machines, more than 20 combines of various types, and approximately 2,000 tractor-drawn trailers are standing idle in this oblast. On many farms

Repkinskiy, Semenovskiy, and Nosovskiy rayons, standard output figures are being achieved by only 70-75 percent.

Advanced techniques in feed production are being inadequately adopted in this oblast. The majority of farms are not employing accelerated drying of damp hay under plastic film. They are producing 47 tons of grass meal per standard unit, while the figure being achieved in neighboring Kiev, Zhitomir, and Sumy oblasts is 77-92 tons.

Straw is an important source for replenishing the feed balance. Most farms are stacking straw after threshing grain crops. On the Shlyakh Do Novoho Zhittya Kolkhoz in Zhovtnevyy Rayon, Nikolayev Oblast, a 6-man team, using a stacker, is clearing 200 hectares of straw daily. Labor productivity has increased to 3.5 times that with customary work procedures. Field workers in Voroshilovgrad, Donetsk, Zaporozhye, Crimean, and Kherson oblasts have organized this job well. At the same time the farms of Vinnitsa, Chernovtsy and Ivano-Frankovsk oblasts are being slow about laying in this feed. Straw has not been stacked on 27-46 percent of threshed-grain acreage, and a considerable portion of the straw is losing its nutritional value.

According to the figures of the UkrSSR Central Statistical Administration, feed production progress on kolkhozes and sovkhozes as of 6 August is characterized by the following figures (prepared, as percentage of plan target)

Oblast	Hay/Haylage/Bulk Silage/Grass Meal/Straw/Repeated Sowings					
Vinnitsa	66	83	9	57	18	69
Volyn	98	82	12	40	38	62
Voroshilovgrad	57	16	2	31	36	117
Dnepropetrovsk	70	86	6	57	33	86
Donetsk	78	92	9	34	59	60
Zhitomir	67	90	15	38	39	42
Transcarpathian	64	115	30	90	41	46
Zaporozhye	85	56	7	25	53	113
Ivano-Frankovsk	54	82	22	46	12	22
Kiev	62	113	3	65	41	82
Kirovograd	108	106	10	55	40	96
Crimean	83	123	20	41	61	105
Lvov	66	50	33	64	19	35
Nikolayev	69	127	7	35	26	66
Odessa	98	93	4	25	35	41
Poltava	28	59	18	97	33	63
Rovno	92	97	19	88	31	52
Sumy	47	104	9	66	25	42
Ternopol	77	148	14	42	9	37
Kharkov	64	42	0.1	53	33	150
Kherson	63	74	17	32	46	73
Khmelnitskiy	70	133	8	60	11	69
Cherkassy	87	88	7	51	25	69
Chernovtsy	56	105	9	52	6	59
Chernigov	52	35	19	40	27	24

As silage crops ripen, more and more farms are commencing ensilaging operations. This year 61 million tons of silage is targeted. It is particularly important here to conduct operations in a unified system, at a rapid pace, in order to fill silo space quickly, rigorously adhering to proper ensilaging procedures.

Many kolkhozes and sovkhozes in Voroshilovgrad, Donetsk, Kharkov, Dnepropetrovsk, and other oblasts are ensilaging marsh vegetation and straw.

The workers on the Kolkhoz imeni Dzerzhinskiy and Ovidiopolskiy Rayon, Odessa Oblast, established a rapid work pace from the very first days of corn ensilaging: every day they are putting 600 tons or more of bulk silage into the silo trenches. The farms of Artsizskiy, Tatarbunarskiy, and Reniyskiy rayons in Odessa Oblast have done a good job of organizing ensilaging.

On the kolkhozes and sovkhozes of Crimean oblast, however, 23 percent of forage harvesters have not yet been readied for operation. The situation is similar on the farms of Nikolayev Oblast, where 261 forage harvesters have not been repaired to operating condition.

STOCKS OF GRAIN FODDER CAN BE REPLENISHED BY EXTENSIVELY UTILIZING PREPARATION OF COMBINATION SILAGE AND PRESERVING OF DAMP GRAIN CORN. Success here depends on prompt preparation of equipment and storage facilities. These methods of preparing feed make it possible to boost by 25-30 percent nutrient substance yield per hectare of corn and to reduce the cost per feed unit by as much as 30 percent.

The kolkhozes and sovkhozes of Kherson, Odessa, Dnepropetrovsk, Kirovograd, and Kharkov oblasts prepared in an efficient manner for preserving moist grain corn. Preparation of structures and equipment is now completed, fodder harvesting detachments have been additionally-manned with experienced farm machinery operators, and moral and material incentives have been devised. But managers and specialists on a number of farms in Kiev and Zhitomir oblasts are being slow about completing preparations for this work.

REPEATING SOWINGS PLAY AN IMPORTANT ROLE IN FODDER PRODUCTION. Second fodder crops have already been sown on 1.5 million hectares in this republic. By efficiently utilizing this acreage, one can substantially add to stocks of coarse and succulent fodder. They are accomplishing this in Voroshilovgrad, Dnepropetrovsk, Kirovograd, and Kharkov Oblast, where sowing targets have almost been completed.

The kolkhozes and sovkhozes of Bashtanskiy Rayon, Nikolayev Oblast are making good use of this potential, where 13,400 hectares have been second-crop sown, or 172 percent of target. The second-crop sowing target has been met by double on the Avangard Kolkhoz in Yelanetskiy Rayon, Nikolayev Oblast. But the best afterharvest sowing times are being passed by on many farms in Chernovtsy, Transcarpathian, and Ivano-Frankovsk oblasts.

It is essential not to waste time, but immediately following harvesting of grain crops to schedule application of organic fertilizers, thorough preparation of the soil and, wherever possible, water-charging irrigation, in

order to obtain in the fall a sufficient quantity of green fodder. Preference should be given to cruciferae species and mixtures, which have a short vegetative period and a high digestible protein content.

Fodder harvesting and preparation is continuing. It is the task of farm managers and specialists to show greater flexibility and skill, to move equipment around taking weather conditions into account, in order to step up harvesting operations in the fields and meadows, utilizing all available reserve potential for increasing fodder stocks.

3024  
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## LIVESTOCK FEED PROCUREMENT

### PRODUCTION, PROCUREMENT OF HIGH QUALITY FEED DISCUSSED

Moscow ZHIVOTNOVODSTVO in Russian No 6, Jun 84 pp 2-6

Article: "More High Quality Feed"

Text "The basic directions to be followed for developing our economy have been defined by the party. Intensification, accelerating the introduction into production of scientific and engineering achievements and the implementation of large-scale all-round programs -- in the final analysis, all of these factors must serve to raise the productive forces of our society to a new level from the standpoint of quality."

From a speech delivered by the General Secretary of the CPSU Central Committee Comrade K.U. Chernenko during the February (1984) Plenum of the CPSU Central Committee.

Among the tasks for further developing the economy and raising the welfare of the people, as set forth in the decisions handed down during the 26th party congress and subsequent plenums of the CPSU Central Committee, an important place is occupied by further improving and raising the efficiency of animal husbandry. This branch plays a strong role in the formation of the food fund, it is presently furnishing more than 55 percent of the gross agricultural output and it is exerting a noticeable influence on the economic status of the kolkhozes and sovkhozes.

In a speech delivered before the All-Union Economic Conference on the Problems of the Agroindustrial Complex, which was held in March of this year, the General Secretary of the CPSU Central Committee Comrade K.U. Chernenko stated: "Today we are confronted with the task of achieving higher goals in the production of grain and technical crops and supplying the nation with food products and particularly meat and milk..." This instruction has been accepted by the livestock breeders and all agricultural workers as a guide for the carrying out of daily work associated with increasing the production and sale to the state of livestock products.

Last year and during the first half of this year, noticeable positive results were achieved in the development of animal husbandry. The farm workers are presently directing their efforts towards consolidating and developing these successes, achieving a stable increase in the production and sale of products

to the state and raising still further all of the quality indicators in the branch's operations. In order to solve this task, considerable improvements will be required in the productivity of all types of livestock and poultry and intensive production methods, progressive technologies and new forms and methods for organizing and stimulating labor will have to be introduced into operations in all areas.

All work aimed at intensifying and raising the efficiency of animal husbandry must be directed towards obtaining a maximum amount of products from each hectare of agricultural land, from each head of livestock and from each meter of production capacity, that is, raising the average milk yields and daily weight increases in the animals during raising and fattening, the egg production of poultry and the average clippings of wool from sheep.

However, as yet only the initial steps have been taken in this direction. In 1983, for example, beef production in live weight, per animal available at the beginning of the year and for kolkhozes and sovkhozes on the whole, amounted to 103 kilograms, for the Ukraine -- 101 kilograms and Belorussia -- 110 kilograms, despite the fact that at leading farms in these republics 140-160 kilograms and more are being obtained per head. Over the past few years, in the Trans-Caucasus republics, in Turkmenia and in Ivanovo, Kaluga and Chimkent oblasts, only 60-85 kilograms of beef per head have been obtained. Owing to low daily weight increases, the cattle on many farms require 2.5-3 years in order to reach the required delivery condition instead of 15-18 months. At such farms the feed, labor and productive capabilities are being utilized in an unproductive manner. Roughly the same situation prevails in hog raising. Although under intensive feeding conditions the leading farms sell their hogs for meat purposes at 6-7 months of age, in order to achieve a weight of 100 kilograms these animals are often held for a year or more.

The task of raising the productivity of the animals and converting over to progressive technologies for the production of livestock products can only be solved on the basis of comprehensive development and strengthening of the feed base. This is especially important at the present time with a program underway aimed at utilizing intensive factors for raising the production of farm goods and with each additional kilogram of feed being used to obtain product and not to maintain the vital functions of the animals. This year the situation must be such that each farm will have an adequate supply of diverse types of high quality feed and also carry-over supplies of such feed.

One of the central tasks in feed production is the practical implementation of the instructions handed down during the July (1978) and May (1982) plenums of the CPSU Central Committee with regard to attaching a branch nature to feed production at all kolkhozes and sovkhozes and developing the feed industry to the maximum possible degree. In recent years, a great deal has been accomplished in this regard. Last year, for example, more than 76,000 specialized teams, brigades, departments and mechanized detachments, 160 inter-farm enterprises and 280 specialized farms for feed production were in operation at kolkhozes and sovkhozes throughout the country. Approximately one third of all of the feed lands was assigned to subunits which operated on the basis of the collective contract system.

The branch's logistical base has become stronger. During the past 2 years alone, the pool of self-propelled feed harvesting combines increased by more than 32,000 units, pick-up balers -- by almost 13,000 and pull-type silage harvesting combines -- by 9,000 units. At the present time, more than 90,000 self-propelled and highly productive feed harvesting machines and many other items of equipment are in operation at the kolkhozes and sovkhozes.

Silage and haylage installations for 66.5 million cubic meters and hay storehouses for 2.8 million tons have been introduced into operations. Large quantities of fertilizer are being applied in behalf of forage crops and improvements have been realized in seed production for grasses. The measures undertaken made it possible in 1983 to procure 17 percent more coarse and succulent feed than was procured on the average during the 1976-1980 period.

At the same time, it bears mentioning that all that has been accomplished towards increasing the production of coarse and succulent feed represents only the beginning of the great work which must be carried out in each rayon and on each farm in the interest of creating a reliable feed base. In conformity with the volumes called for in the Food Program, by 1990 the production of all types of feed must be increased by more than one third compared to 1983.

Taking into account the increasing logistical and organizational potential, the leaders and specialists of farms, agroindustrial associations in many rayons, oblasts, krays and autonomous republics must define more precisely the measures to be employed for increasing the production of feed, particularly hay obtained from leguminous grass mixtures, root crops and green and pasture feed. An increase in the production of these types of feed is associated with achieving further improvements in the full-value nature of the rations for cows and replacement young cattle stock. Thus correct action is being taken on many farms in Belorussia and the Baltic republics, in the non-chernozem zone of the RSFSR and in Kiev, Cherkassy, Lvov and other oblasts in the Ukraine, where the task has been assigned of raising hay procurements per cow to 1.5-2 tons and feed root crops to 4-5 tons or more.

Such a task is fully understandable to each specialist and to all workers attached to farms and feed production subunits. The efforts of the work collectives of kolkhozes and sovkhozes are being mobilized for the purpose of solving it and the plans call for making complete use of the assistance being provided by supporting municipal organizations.

The introduction of zonal scientifically sound farming systems and efficient crop rotation plans has enabled a majority of the kolkhozes and sovkhozes to improve considerably the structure of their feed plantings, to raise the productivity of their feed fields and to increase the gross yields of feed without having to expand the areas for these sowings. Thus, last year alone the sowings of perennial grasses and food roots were increased by 10 percent on farms in the RSFSR and with no change taking place in the overall area of the feed fields. Leguminous grasses and their mixtures occupy 56 percent of the overall area sown in grasses in the republic, in Belorussia -- 62, in the Ukraine -- 86 percent. Twice as much rape and other cruciferae family crops, which are distinguished by a raised protein content and milk-producing action, were grown for feed purposes than was the case last year. In the Russian

Federation the plans called for 110-115 kilograms of mineral fertilizer in active agent to be applied per hectare of forage crop sowing and on irrigated lands -- not less than 220 kilograms. Organic fertilizers were applied in the republic to an area of 5 million hectares of forage crops -- an average of 5.8 tons per hectare compared to 4.3 tons in 1983. Forage crop sowings under irrigation were expanded to 3 million hectares, with the plans calling for these areas to supply 4,500-5,000 or more feed units per hectare, an increase by a factor of 1.4 in the feed yield obtained from reclaimed lands. Similar measures are being carried out in other union republics. The feed harvesting equipment was prepared better than in previous years.

The present period is a very important one in feed production -- the harvesting of grasses for hay and haylage, grass meal and cuttings is in progress, early silage is being placed in storage, chemical preservation work is being carried out on the fodder and the row forage crops are being tended. The farms are actively preparing for the mass ensiling of feed. A distinctive feature of this present busy feed season is the extensive use of specialized feed procurement subunits that are supplied with highly productive equipment and transport and which operate on the basis of a single order while employing diverse forms of moral and material incentives in order to achieve high final results -- an increase in the procurement of feed and improvements in its quality. For example, compared to last year the number of specialized subunits engaged in the production and procurement of feed and operating on the basis of collective contracts in Bryansk, Vladimir, Smolensk and Saratov oblasts, in Krasnoyarsk Kray and in the Chuvash and Mary ASSR's has increased by a factor of 2-3 or more.

In 1983, specialized feed production brigades were in operation at 547 out of 642 kolkhozes and sovkhozes in Gorkiy Oblast and they procured more than 80 percent of all of the feed. Many of them achieved high indicators. For example, the brigade headed by Comrade Lisin at the Niva Sovkhoz obtained 4,400 feed units from each of 2,529 hectares of forage crops in 1983 and on the average 366,000 feed units were produced per machine operator. At the end of the year the machine operators were awarded prizes and bonuses amounting to 1 ruble and 16 kopecks for each ruble earned. The oblast's feed procurement brigades are enjoying deserved respect. Brigade leaders I.P. Boyarskiy and M.I. Gogin, based upon a presentation by oblast organizations, were awarded the high title of Hero of Socialist Labor by the Presidium of the USSR Supreme Soviet and V.I. Soldatov was awarded the State Prize of the USSR. This year the specialized farms are to be found at all of the farms.

Many examples can be found in all of the republics and oblasts of specialized subunits undertaking the complete production and procurement of the principal types of feed and achieving high and stable forage crop and grass yields, thus creating a reliable base for further improvements in animal husbandry.

Last year the brigade of G.A. Pegashev at the Vstrecha Kolkhoz in Sheksninskiy Rayon in Vologda Oblast obtained 6,110 feed units from each of 324 hectares of sown perennial grasses (without irrigation); the team of A.K. Posyl'niy at the Tikhiiy Don Kolkhoz in Petropavlovskiy Rayon in Voronezh Oblast -- 8,170 feed units from one irrigated hectare; the team of N.A. Glushko at the Progress Sovkhoz in Saratov Oblast -- 14,094 feed units from one irrigated hectare. The

The team of V.P. Makarov at the Put' K Kommunizmu Kolkhoz in Stepnovskiy Rayon in Stavropol Kray obtained 803 quintals of perennial grass fodder, 450 quintals of silage corn and 1,000 quintals of fodder beets from 1 hectare of sowing. The brigade of K. Amanov at the Pakhtaaraal Kolkhoz in Pakhtaarskiy Rayon in Chimkent Oblast obtained 253 quintals of hay from each of 80 hectares of irrigated alfalfa and the brigade of S. Eshmatov at the Oshskiy Sovkhoz in the Kirghiz SSR obtained 139 quintals of corn grain and 221 quintals of alfalfa hay from one irrigated hectare.

Reserves are available in each rayon and each farm for raising the productivity of the feed fields and they must be utilized so as to produce a maximum return. In solving this task, the leaders and specialists of the kolkhozes, sovkhozes and agroindustrial associations are obligated to take into account the entire range of problems and particularly the first and foremost one -- providing the feed fields and meadows with true masters -- which today are those subunits which operate on the basis of brigade contracts.

The central task -- to make maximum use of all feed harvesting equipment in all areas, forming for this purpose mechanized teams, brigades and detachments on the farms and on an inter-farm basis. In the process, special attention should be given to the correct ratio in such subunits for the equipment required for mowing the grasses, drying out and picking up the windrows and baling and transporting the hay, haylage of silage bulk. Unfortunately, the mistakes of past years are still being tolerated in some areas, with the grasses over large tracts being cut down in just one day, only to be left in windrows for an extended period of time where they are dried out to an excessive degree by the sun or they are rained upon and thus lose some of their quality. The same rule should be followed by each farm -- cut down only as much grass as can be dried out and picked up during the course of 1-2 days. The leading kolkhozes and sovkhozes use mower-crushers, rake-agitators, pick-up balers and other items of equipment for this purpose.

In the preparation of good hay and haylage, special importance is attached to the mown fodder being dried out in a uniform manner. This requires the use of rake-agitators, which industry is producing in insufficient quantities. But in many rayons the production of these units has been organized at enterprises of Goskomsel'khoztekhnika. This work is organized especially well in Leningrad, Bryansk, Smolensk, Gorkiy, Saratov, Perm and Kaliningrad oblasts. Many farms are successfully employing written off and re-equipped grain combines, self-propelled harvesters and other items of equipment for the mowing of perennial grasses and the picking up of windrows.

Large areas, especially in the non-chernozem zone of the RSFSR, in the forest district of the Ukraine and in Belorussia, are inaccessible for the mechanized harvesting of grasses. Here it is necessary to make full use of horse-drawn mowers and rakes, manual implements and to enlist the aid of the rural population and the collectives of supporting organizations for carrying out the feed procurement work. In the process, it must be remembered that it is not simply a matter of assembling the personnel so that they can cut down the grass using any method. An entire complex of operations must be carried out in order to ensure the procurement of high quality feed and this requires the formation of permanent all-round brigades for the entire hay harvesting period, brigades

which will ensure the mowing, drying out, stacking or shipping of the feed bulk to the storage areas. Only in this manner will it be possible to make efficient use of the labor resources and ensure the procurement of high quality feed.

The first and foremost task in feed production -- improving the quality of the feed. A great deal has already been accomplished in this regard. During the years of this current five-year plan, the proportion of 1st and 2d grade hay increased from 52 to 64 percent, haylage -- from 43 to 58 and silage -- from 52 to 68 percent. On farms in Latvia, Lithuania and Estonia, 83-97 percent of the hay, haylage and silage procured during 1983 was of 1st or 2d grade quality. Noticeable improvements have taken place in the quality of the feed being obtained on farms in the Ukraine and Belorussia, Krasnodar Kray and in Belgorod, Saratov, Tomsk and some other oblasts. At the same time, 25 percent of the hay, 68 percent of the haylage and 32 percent of the silage checked in Armenia turned out to be of sub-standard quality. The quality of the feed being obtained on farms in Kazakhstan, in Kirov and Kurgan oblasts and in the Udmurt ASSR is low. All of this leads to a low return from the feed in terms of livestock products.

There are various reasons for the losses. According to data supplied by the All-Union Scientific Research Institute of Feed, 43 percent of the losses occur as a result of failure to observe the grass harvesting periods, 24 -- because of violations of the procurement technology and 33 percent -- owing to incorrect storage.

By no means should the grasses be allowed to become overripe. Studies have shown that the bulk yield increases by 12-15 percent when the cereal grasses are harvested during the blossoming phase compared to the heading phase, but on the other hand a decrease takes place in the overall nutritional value and protein content of the feed. When cows are fed grass which was harvested during the blossoming phase, the milk yields are lowered by twofold and milk production per hectare -- by a factor of 1.5.

The principal means for raising the quality of procured feed and increasing the nutrient yield per unit of space on this basis -- is that of employing such progressive technologies for procuring and storing feed bulk as artificial dehydration of grasses, hay preparation using the forced ventilation method and the chemical preservation of feed. Moreover, the results are greater if all of the requirements for a particular technology are observed in a strict and accurate manner. For example, through the artificial dehydration of alfalfa or clover bulk it is possible to retain up to 90-93 percent of the nutrients and obtain feed with a content of 0.7-0.8 feed units, up to 18-20 percent protein and 200-250 milligrams of carotene per kilogram. If the grass meal is prepared from grasses which were mown later than the optimum periods, and the drying regime was not observed, then the nutritional value of the feed will be lower by twofold. Roughly the same difference prevails with regard to the nutritional value of hay procured using the forced ventilation method and also for grasses left to dry out on a field.

Many farms are still tolerating considerable deviations from the requirements for the haylage preparation technology. Some specialists have already fallen

into a certain habit -- just as soon as the weather turns bad, they place their grasses in storage as haylage while they are still in extreme need of sun-drying. According to data supplied by an agrochemical laboratory, in 1983 the moisture content of haylage bulk on farms in Armenia, Tambov, Irkutsk, Khamilnikskiy, Dzhambul and some other oblasts reached 69 percent instead of 50-55 percent in accordance with the norm and the nutritional value of such feed was 0.14-0.22 feed units, that is, poor silage was obtained instead of haylage. The misfortune was further aggravated by the fact that leguminous grasses and mainly alfalfa were mainly used for the haylage and it is known that alfalfa becomes mouldy and unsuitable for use in the presence of a high moisture content. Another extreme -- excessive drying out of the bulk in windrows also leads to great nutrient losses. Thus, in leguminous grass bulk having a moisture content of 50-55 percent, the losses in dry substance amount to only 8-12 percent and protein -- 9-16 percent of the amount available in freshly mown grass. If the bulk is dried out to a moisture content of 40 percent, the losses increase twofold and to a moisture content of 20-25 percent -- roughly by threefold. Here there can be only one conclusion -- in the preparation of haylage the technology must be observed in a very strict manner.

It should be borne in mind that when there is a violation of the feed procurement and storage technology, the adverse consequences are not limited to merely a shortfall in feed energy. As a result of low quality hay, haylage and silage, large quantities of feed, including grain forage, are consumed for the production of a unit of livestock product. During experiments carried out at the All-Union Scientific Research Institute of Feed imeni Vil'yams, involving the feeding of young bulls 1st grade silage to their heart's content, a daily increase in weight of 1 kilogram was obtained from the consumption of 2 kilograms of concentrated feed and when use was made of sub-standard silage the daily issuing of concentrates had to be increased to 4.5 kilograms in order to obtain the same weight increase. During studies carried out in the GDR, with 1st, 2d and 4th grade haylage being fed to an experimental group of cows and with 3 kilograms of concentrated feed being added, the daily milk yields amounted to 15.4; 8.7 and 4.2 kilograms respectively.

It thus follows that the solution for the task of utilizing grain for forage purposes is greatly dependent upon improving the quality of the coarse and succulent feeds. This fact must constantly be borne in mind by the leaders and specialists of farms and agroindustrial associations.

An analysis of kolkhoz and sovkhoz operations, carried out by the USSR Ministry of Agriculture, reveals that a broad complex of measures is being carried out in many republics, krays and oblasts aimed at introducing progressive technologies for the procurement, storage and utilization of feed. This year the plans called for a twofold increase in the volumes of hay baling and drying work, with the drying carried out using the method of forced ventilation, and also an increase by a factor of 1.5 in the use of plastic for covering the haylage and silage. Compared to last year, considerably more storehouses will be built for hay, haylage, silage, root crops, grass meal and briquetted and granulated feed. However, whereas the availability of substantial storehouses for haylage and silage in many republics remains at 80-90 and even 100 percent, for hay very few such installations have been built and they are being erected very slowly. In Belorussia, hay storehouses for only 207,000 tons were placed in operation last year and in the Ukraine -- for only 113,000 tons. In

Moldavia, the plans for this current year call for the construction of storehouses for 10,000 tons. Despite an extremely low availability of hay storehouses, the construction of such facilities is proceeding very slowly in Uzbekistan, Kazakhstan, Armenia and in Novgorod, Ivanovo, Kaluga, Ryazan and Voronezh oblasts. Last year the plans for building hay storehouses on farms in Tula, Kirov, Tambov, Penza and some other oblasts were fulfilled by only 50 percent.

It is known that hay and other coarse feeds retain their properties better when in baled form. Although all of the conditions are available for expanding this feed procurement method, as yet full use is still not being made of it. At kolkhozes and sovkhozes in the Ukraine, for example, the availability of equipment makes it possible to bale more than 3.5 million tons of hay and yet less than 1 million tons are being prepared, and at a time when the farms in Latvia and Estonia are baling 75-90 percent of all hay being procured. In past years, weak use was made of baling equipment in Uzbekistan, Moldavia and Georgia. This situation should be corrected in a decisive manner.

In recent years, the rations for ruminant animals have contained considerable quantities of haylage. Its preparation from grass and legume mixtures, with all of the technological requirements being met, is making it possible to raise the nutrient yield per unit of feed space and to mechanize all processes concerned with the laying in, storage and use of the feed bulk. Thus the retention of grass nutrients in high quality haylage is roughly the same as that realized from the chemical preservation of feed bulk and highly by almost twofold compared to field dried hay. But in order to obtain such feed, the schedules for mowing the grasses (prior to blossoming) must be observed in a strict manner. They must be sun-dried in the windrows (to a moisture content of 50-55 percent), milled, the storehouses filled up rapidly, the trenches must be thoroughly tamped down and the bulk must be covered with plastic.

A complex of machines is required in order to obtain high quality haylage: highly productive mowers (mower-crushers for leguminous grasses), pick-up mincers, transport wagons and, certainly, substantial feed storehouses. Thus we cannot recognize as correct the actions taken by the leaders and specialists of those farms where poorly sun-dried bulk is placed in trenches or even in clamps, it is weakly tamped down and poorly insulated against penetration by air. As a result, low quality feed is obtained here and considerable feed losses sustained.

The best quality haylage is obtained when it is stored in tow, but in the process extreme importance is attached to ensuring that all of the technological requirements are observed. At the Mir Sovkhoz-Combine in Brest Oblast, 40,000 tons of haylage are procured annually using this method, with haylage being the principal ration for the raising and fattening of 15,000 head of young cattle stock. There are 34 towers on the farm and this year construction will commence on 16 more storehouses of the tower type. For loading the bulk, each tower is equipped with a set of machines, including TZB-30 and KTU-10 loaders and a UN-50 bulk loader. An RBV-6 unloader in assembled form is elevated under the dome of a tower on a special platform having a motor reduction gear. During the laying in period, each tower is serviced by one operator. As necessary, he regulates the operation of the bulk distributor, such that it is placed against the wall in the shape of an inverted cone. In order to prevent feed spoilage in

the upper layer, the loaded bulk is hermetically sealed immediately using a plastic cover made especially for this purpose. One kilogram of such haylage contains 0.31 feed units, 47 grams of crude protein and 18 milligrams of carotene.

In 1983, 9,600 tons of haylage were placed in storage in 11 towers at the Put' K Kommunizmu Kolkhoz in Yeyskiy Rayon in Krasnodar Kray. One more tower was placed in operation for this present season. For procuring the haylage, use is made of a special detachment consisting of four sets of self-propelled mower-mincers and 15 self-tipping transport units. The moisture content of the haylage bulk is determined by a duty laboratory worker using two VZM-1 instruments. The loading of the bulk from the platform is carried out using a UN-50 loader and an electrified KTU-10 feed distributor, which delivers it uniformly to the TZB-30 conveyer line. Two towers are simultaneously serviced by a team consisting of a machine operator for loading the bulk and two operators. The bonus method of payments is employed at the kolkhoz; this stimulates the feed production workers into observing the requirements of the haylage technology in a very strict manner. When 2d grade haylage is obtained, the additional payment amounts to 30 percent and for 1st grade -- 60 percent of the principal wage.

When harvesting grasses for hay and haylage, the kolkhozes and sovkhozes are obligated to ensure the timely preparation of the equipment and a high level of efficiency in carrying out all operations associated with the ensiling of feed. The silage procurement volumes are constantly increasing. This year the laying in of silage must be increased considerably. A change is taking place in the quality structure for this type of feed. Corn serves as the foundation for the silage crops. With the introduction into production operations of early maturing corn hybrids and highly productive machines, it is becoming possible for more and more farms to raise this crop and to lay it away for silage together with the ears. This will make it possible to raise the content of dry substance in the silage and, it follows, to increase the nutrient yield per unit of space and to improve considerably the quality of the succulent feed. In the process, importance is attached to making full use of the potential available for the chemical preservation of silage bulk, through the use of mixtures of organic acids, formaldehyde, other preservatives and special ensiling yeasts.

The experience of many farms in Belorussia and the Baltic republics and in Moscow, Leningrad, Kiev and Kharkov oblasts reveals that the use of chemical preservatives makes it possible to raise the nutritional properties of feed noticeably, improve the sugar-protein ratio in a ration and achieve a considerable increase in the production of livestock products with fewer expenditures of feed.

Special attention must be given to increasing the laying in of mixed silage for hogs, using for its preparation corn ears of milky-waxy and waxy ripeness, root crops, potatoes and leguminous grass fodder, with the addition of the chaff or straw of pulse crops that has been milled into meal. Roughly 8.3 million tons of such silage were laid away in 1983 and this year the volumes must be increased by a minimum of 2-2.5 million tons. The farms in Voronezh, Belgorod, Kharkov, Poltava and many other oblasts have accumulated a great amount of experience in laying away such feed and they are using it efficiently

in hog raising and in increasing the milk yields. On each farm the storehouses must be prepared in advance, the raw material and equipment sources must be defined and the laying in of high quality mixed silage must be organized.

In the interest of intensifying control and organizing a campaign to raise the nutritional value of the feed being procured in all areas, the quality of the feed must be determined in a systematic manner at agrochemical, veterinary and other laboratories, the laboratories of agricultural VUZ's and technical schools and experimental stations should be included in this work, circular routes should be organized for the mobile laboratories and as many kolkhozes and sovkhozes as possible should be provided with the instruments and equipment required for taking samples, determining the moisture content of the feed bulk as well as its protein and carotene content. The task consists of ensuring that each farm is aware of the actual nutritional value of the feed procured. The work performed by feed production workers should be paid for based upon the quality of the feed. One important task in animal husbandry -- that of ensuring that the livestock are supplied with green and pasture feed during the summer. Many farms, as a result of having made efficient plans for their principal and intermediate sowings of forage crops and having created long-standing cultivated pastures, are able to ensure a continuous supply of fodder and can organize effective grazing and fattening of their animals on cheap feed. Special attention should be given to expanding the repeated sowings of high protein cruciferae family crops, organizing top dressings and waterings for perennial cruciferae family crops and also organizing top dressings and waterings for perennial grasses and cultivated pastures and the efficient use of green feeds.

Summer is a most important period for carrying out all work associated with improving the haying and pasture lands. Radical improvements in these lands have been carried out on an area of just slightly more than 20 million hectares and this is clearly insufficient. With each passing year, the land reclamation organizations are failing to carry out their established plans for the cultivation of natural feed lands. Over the past few years in the non-chernozem zone of the RSFSR, the plan for carrying out this work was fulfilled by less than 50 percent. The agroindustrial associations must raise their exactingness of their agricultural partners and ensure unconditional fulfillment of the plans for this year and the five-year plan as a whole, with regard to radically improving the meadows and carrying out soil improvement work on these lands.

The conditions are available for accomplishing this. Improvements have taken place in the equipping of the land reclamation organizations and in a majority of rayons the seed requirements for alfalfa, clover and productive cereal grasses are being satisfied. The experience required for creating highly productive haying and pasture lands has been accumulated. More complete use is being made of the potential of the kolkhozes and sovkhozes for carrying out surface improvements on the feed lands. The regrassing of haying lands and pastures must be carried out. All of this is being paid for through the increased production of livestock products.

Just as in other branches of agriculture, the personnel play a great role in feed production. The level of their technical and economic training and the

system of moral and material interest on the part of the workers in achieving high quality feed must constantly be the objects of attention by the leaders and specialists of the farms and agroindustrial associations.

Normal working and recreation conditions must be created for all those engaged in feed procurement work and public catering, trade and cultural-domestic services must be organized. Sel'khoztekhnika and the engineering service for the farms must organize continuous technical services for the brigades and teams.

The party and professional trade union organizations must launch an effective socialist competition among the feed procurement workers aimed at fulfilling and over-fulfilling the established tasks and achieving economies, thrift and high quality feed. The labor rivalry out on the country's fields and meadows is increasing in force and scope with each passing day, new rayons and an increasing number of mechanized subunits are joining in this competition and village and city workers are actively participating in it. And importance is being attached to publicizing this competition on an extensive scale, summarizing its results on a regular basis, singling out the winners, uncovering and correcting mistakes and derelictions in a timely manner and furnishing assistance to backward elements. The work being carried out by the mass media in the various areas, the assistance being furnished by the specialists and scientists and the organizational activity of the economic leaders must be directed towards achieving these goals.

The procurement of maximum quantities of diverse types of high quality feed and to make this feed fully available to animal husbandry -- this will provide a reliable foundation for further raising the productivity of the animals and for carrying out the tasks of the country's Food Program aimed at increasing the production of meat, milk and other products.

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## LIVESTOCK FEED PROCUREMENT

### SCIENTIFIC CONFERENCE CONSIDERS FEED PROTEIN PROBLEMS

Moscow SEL'SKAYA ZHIZN' in Russian 27 Jul 84 p 2

Article by M. Sil'vanovich, Omsk: "It Begins With a Field"

Text Notes from a scientific conference on feed protein.

Owing to a feed protein deficit, animal husbandry annually consumes 40 million tons of feed units over and above the norm, that is, roughly 10 percent of the gross production of such units. And when one considers that 1 feed unit is the equivalent of a kilogram of grain, then it readily becomes apparent that the loss of 40 million tons of this valuable product constitutes a great waste!

The agricultural science long ago developed the means and methods for compensating for the annual loss of 5-6 million tons of digestible protein. The scientists believe that improvements must be carried out first of all in the structure of the feed sowings, by raising the proportion of high protein crops in them and also their yields; improvements must also be realized in the feed procurement, storage and preparation technology; the production of industrial protein must be increased and, finally, the feed protein must be utilized in an efficient manner.

The above subjects were discussed recently at Omsk during a scientific conference on the problems concerned with increasing the production of plant protein and raising its quality. Information and reports on this subject were provided by VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ academicians A.P. Kalashnikov and N.Z. Milashchenko, corresponding members of VASKhNIL M.A. Smurygin and N.G. Grigor'yev, doctors of agricultural sciences A.A. Babich, Yu.K. Novoselov and V.P. Orlov and other scientists and specialists. The first part of the problem mentioned during the conference -- agronomic. It is first in importance, since plant protein constitutes 95 percent of the overall volume of protein consumed by animals. Its production departments -- fields, meadows and pastures.

It has become customary in agricultural practice to evaluate the size of a crop based upon the feed unit yield per hectare. Today the task consists of acquainting all without exception with the fact that a feed unit from the grain of cereal grass forage crops contains 80-85 grams of protein, one fourth less than the norm, whereas in the grain of leguminous grasses the amount of protein is greater by a factor of 2-3 for an identical yield. Indeed today a ration

is considered to be rich if it contains a large amount of grain. But if all were convinced that its value is not determined by this factor, then in all probability the concentrate volumes consumed would be determined not on the basis of feed units but rather taking into account their protein content. From this point, only one action needs to be taken in order to introduce serious corrections into the structure of the area under crops in favor of pulse crops.

Special attention must be given to expanding and improving the varietal structure for the pulse crops. In the opinion of scientists attached to the All-Union Scientific Research Institute of Feed, the principal pulse crop in the southern regions of the non-chernozem zone, in the forest-steppe and steppe zones of the European party of the USSR, in Kazakhstan and in the Urals must be that of peas, in the arid regions of the southeast -- peavine and chick peas, in the western regions of the non-chernozem zone -- peas and fodder beans, on the light-textured soils in the forest zone -- fodder lupine and in the Far East and the southern European territory of the country -- soybeans.

A great future lies in store for rape. A kilogram of haylage prepared from its bulk contains 0.27 feed units and approximately 30 grams of digestible protein and its silage -- 0.18 and 23.5 respectively. Rape is a fine addition to the green production line. In Siberia it is the only crop which furnishes fresh high protein bulk right up until late autumn.

Distinct from other departments, the farming department is more compliant with regard to an operational change in a technology or in other means for carrying out scientific works. At times, there is not even a need for large capital expenditures. At the present time, more than one half of the perennial grass areas are occupied by cereal grasses, which in keeping with the modern level for the use of chemical processes, contain no more than 75-80 grams of protein in one feed unit. This is clearly insufficient. Meanwhile, the protein deficit out on the grass fields can be eliminated completely by raising the proportion of pulse crops. By 1990, of 27.4 million hectares of perennial grasses, according to estimates by the All-Union Scientific Research Institute of Feed, no less than 21 million (76 percent) must be set aside for leguminous grasses, including alfalfa -- 10, clover -- 8.5 and sainfoin -- 2 million hectares. In this instance, the protein yield for this group of feeds is increasing by more than twofold compared to the present level.

As is well known, the greatest protein deficit is being experienced in the winter ration for the animals. The average content of digestible protein for all types of animals, per feed unit, must be not less than 106-107 grams. Actually, in a majority of the country's zones it amounts to 100-102, with 117 for the summer period and 90-93 grams for the winter period.

The principal cause of the protein starvation during the indoor maintenance period has to do with imperfections in the organization and technology employed in the procurement, storage and preparation of feed. This second aspect of the problem is equally important and complicated.

During speeches delivered by those participating in the conference, mention was made of the fact that the production of mixed feed -- the main balancing portion

of the rations -- is not in keeping with the requirements for intensive animal husbandry operations. The operational results of the mixed feed industry, which is concentrated for the most part at enterprises of the Ministry of Procurements, are in no way being coordinated with the production indicators for farm output. Meanwhile, it is precisely through the production of mixed feed and premixes that scientific achievements concerned with full-value feeding can be introduced into operational practice. A tremendous quantity of grain is being processed for feed purposes directly at the kolkhozes and sovkhozes and yet the microbiological industry is supplying very little premixes and other additives for this feed. As a result, large amounts of grain are being consumed and the animal rations are not of full-value.

An increase in the production of protein is being achieved not only by expanding the sowing areas and raising the forage crop yields, but also through the efficient use of an efficient harvesting and procurement technology. Large reserves are available, in particular, in the form of observing the technology for the sun-drying and normal drying of grasses in the fields and meadows. However, the sovkhozes and kolkhozes are being supplied with only limited quantities of the required equipment. And it can generally be said that the absence of a complex of machines for feed production undermines the feed base in like manner as do poor weather conditions and organizational problems.

In a majority of the zones, silage is the principal bulk feed. The nutrient losses in this feed now amount to 30-40 percent. There is but one cause -- violation of the established technology. The preservation of this feed, similar to other feeds, is raised considerably when use is made of chemical preservatives. However, their use is being held up for two reasons: the chemical industry is producing only small quantities of good preservatives and the equipment required for applying them is lacking. The participants in the conference were shown units to be used for applying preservatives, which were developed and produced at an experimental design bureau of SibNIISKhOZ /Siberian Scientific Research Institute of Agriculture/. They are being employed successfully at the Omskoye OPKh /experimental model farm/. Unfortunately however, the experimental models are not solving the problem, even though an adequate amount of time has already passed for organizing the production of such machines in sufficient quantities.

A single and yet substantial shortcoming of the conference was the fact that there was nobody in attendance who could listen to and act upon the comments and recommendations by the scientists on an extremely urgent problem. Despite the fact that the USSR Ministry of Agriculture was one of the first organizers of the conference, there was not one representative from its leading main administrations in attendance. The workers attached to Minzhivmash /Ministry of Machine Building for Animal Husbandry and Fodder Production/, Soyuzsel'khokhimiya, Goskomsel'khoztekhnika, USSR Minzag /Ministry of Procurements and a number of other ministries and departments remained indifferent to the work carried out at this meeting.

Proper credit must be given to the Omsk workers for a measure carried out by them. They succeeded in acquainting the guests in detail with an extensive program for introducing into operations the works of SibNIISKhOZ and other scientific institutes. As a result of the work carried out by them at many

farms throughout the oblast, feed production has become a specialized branch. In 1983, the average protein content per feed unit at farms throughout the oblast was raised to 95 grams. This factor alone resulted in a savings of 240,000 tons of feed units. The livestock breeders obtained additionally more than 67,000 tons of milk and approximately 13,000 tons of meat.

Notable advances were also achieved in other oblasts and these were mentioned with satisfaction during the conference. But the general desire to increase the production of protein and ensure its efficient use in animal husbandry must become a second front, after raising the yields, in the campaign to achieve agricultural efficiency.

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## LIVESTOCK

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### IMPROVING APK INTERRELATIONS IN CATTLE, POULTRY PROCUREMENTS

Moscow MYASNAYA INDUSTRIYA SSSR in Russian No 7, Jul 84 pp 4-7

Article by I.I. Fedorus, USSR minister of the meat and dairy industry:  
"Improvements in Relationships With APK Partners and in Procurements of Cattle  
and Poultry"

Text The desire to achieve the best final result, with minimal expenditures during the course of joint work aimed at implementing the Food Program, is a typical feature of the modern interrelationships among enterprises of the meat industry with livestock farms. This is reflected in the movement which has unfolded among agricultural workers and their related branches of industry, directed towards achieving an above-plan increase in labor productivity and a reduction in production costs, the importance of which was mentioned during the All-Union Economic Conference on the Problems of the Agroindustrial Complex.

For 1984 the collectives of kolkhozes, sovkhozes and enterprises of the meat industry in Ivano-Frankovsk Oblast adopted joint socialist obligations which on the one hand called for the raising of well fed cattle and for the rhythmic sale of such cattle to the state and, on the other, for their timely processing with a maximum yield of finished product.

During 5 months of 1984 and compared to the same period for 1983, the deliveries of cattle and poultry for slaughtering purposes by kolkhozes, sovkhozes and inter-farm enterprises throughout the country as a whole increased by 9 percent or by 507,000 tons. The planned tasks were fulfilled successfully. An increase took place in the quality of the animals slaughtered and sold to the state. Roughly 158,000 additional tons of raw material were obtained for processing merely as a result of an increase in the weight conditions for all types of cattle. The plans for the production of meat products during the 5 month period were over-fulfilled.

This is the second year now that enterprises of the meat industry have been operating within the structure of rayon and oblast agroindustrial associations. During this comparatively brief period of time, considerable improvements were noted in a number of republics, oblasts and rayons with regard to supplying the meat combines with raw materials. The enterprises began working in a more rhythmic manner. The Ukrainian SSR can be cited as a positive example of the organized turning over of cattle. The Council of Ministers for the UkrSSR

approves the plan for the state procurements of cattle and poultry by months and thereafter makes it available to the oblasts, rayons and farms. On the basis of these plans, which call for systematic deliveries of cattle for processing, calendar and hourly schedules for deliveries and acceptance are developed. The rayon and oblast agroindustrial associations are called upon to play an important role in ensuring systematic work in the sale of cattle and poultry to the state. For example, a permanently active committee for problems concerned with the procurement and processing of animal husbandry products has been created within the RAPO /rayon agroindustrial association/ structure in Rakityanskiy Rayon in Belgorod Oblast. In carrying out its work and in addition to ensuring the fulfillment of plans, this committee devotes special attention to developing direct contacts between the kolkhozes and sovkhozes with enterprises of the meat industry. Initially, direct relationships were maintained with the specialized farms of a rayon, which furnish three fourths of the beef, pork and other types of meat. Only last year the rayon's farms obtained 3.5 million additional rubles from the sale of high quality animals. Today the Gotnyanskiy Meat Combine is converting over to the centralized shipping of cattle from other farms in the rayon.

During the 1st quarter of 1984 and for the country as a whole, the acceptance of cattle and poultry at the farms and their centralized deliveries by means of specialized transport equipment increased by 41 percent compared to the same period for last year. For enterprises of the RSFSR Minmyasomolprom, the volumes for the centralized shipping of cattle and poultry increased by a factor of 2.5, the Kazakh SSR -- by 2.2 and for the Azerbaijan SSR -- by a factor of 2.9. The meat combines in the Belorussian SSR, Uzbek SSR, Georgian SSR, Lithuanian SSR and a number of other republics are coping with their raised tasks for the acceptance of cattle and poultry on the farms and for their centralized shipments.

For 1984, USSR Minmyasomolprom /Ministry of the Meat and Dairy Industry/ has established the task of accepting on the farms and carrying out their centralized shipments of 4.6 million tons of cattle and poultry, or almost 1.4 million tons more than last year.

The operational results indicate that a considerable number of the enterprises and associations of the meat industry are able to fulfill but also to over-fulfill the task established for 1984.

In keeping with the example set by the Belgorod Association of the meat industry, use must be made of the positive experience accumulated in developing direct relationships between the enterprises of the meat industry with the kolkhozes and sovkhozes.

The attention being given by the party and government to the development of the processing branches of the country's food complex, including enterprises of the meat industry, is making it possible for the meat combines to raise their production efficiency. In 1983 alone, more than 740 million rubles worth of capital investments were allocated for the development of the meat and dairy industry. Fixed capital valued at 630 million rubles was placed in operation. New technological processes were introduced which make it possible to reduce raw material losses, increase the output of products and make more complete use of all components obtained from the processing of cattle and poultry. At

the present time, the meat combines, operating on the basis of collaboration agreements with partners, are providing them with more and diverse services. This includes the processing of customer-supplied meat into finished sausage and smoked products, the storage of meat products in the refrigerators of enterprises and the processing of cattle, the meat of which is used for public catering and other services.

Experience reveals that full use is still not being made of the opportunities available for improving the work of meat industry enterprises which are included in the structure of agroindustrial associations. Large reserves are available for improving procurement operations. This includes first of all a strengthening of procurement discipline, strict observance of the obligations established in contractual agreements, absolute fulfillment of the schedules agreed upon for the delivery and acceptance of animal husbandry products, smoothing out of the production volumes, carrying out sales to the state according to monthly and calendar periods, correct determination of the quantity and quality of products obtained from the farms and the maintenance of timely accounts for such products.

These tasks are being carried out successfully by those associations and enterprises which, taking into account the existing opportunities within the APK /agroindustrial complex/ structure, are reorganizing their relationships with kolkhozes and sovkhozes by raising the role played by contractual agreements.

This year the contractual agreements for cattle and poultry were concluded based upon the new statute concerning the drawing up and execution of contractual agreements for agricultural products and the new standard agreements approved by USSR Minzag /Ministry of Procurements/ and USSR Minsel'khoz /Ministry of Agriculture/ in November 1983. These documents contain considerable changes and additions aimed at raising the responsibility of the parties involved for violations of the contractual conditions.

In many regions of the country, the campaign to conclude contractual agreements proceeded in an organized manner. For it is precisely in these agreements, which represent a starting point for subsequent and joint work by the farms, procurement specialists and processing workers, that the tasks of each element of the APK with regard to carrying out the Food Program are set forth. In the preparatory work for concluding contractual agreements, special attention was given to an analysis of the results of the fulfillment of 1983 contracts and to uncovering the reasons for non-fulfillment of some obligations. At conference-seminars which were held in autonomous republics, krays, oblasts and rayons for workers attached to procurement organizations, agriculture, rayon and oblast agroindustrial associations and goszagotinspeksiya's, considerable importance was attached to those problems concerned with improving the organization of state purchases of cattle, poultry and rabbits, strengthening procurement discipline, accelerating the conversion over to accepting raw materials directly on the farms, correctly determining their quantity and quality and maintaining accounts with the suppliers.

The organizational work carried out made it possible, within the established periods, to conclude contractual agreements for cattle, poultry and rabbits for 1984.

This year many rayon and oblast agroindustrial associations have improved considerably the work of controlling the timely carrying out of contractual obligations and this has made it possible to surpass the cattle and poultry purchasing level achieved during 5 months of 1983 by 538,000 tons, which amounted to 109 percent of the amount planned for 1984 on the whole, with the rate of growth being 101.4 percent. Using these raw materials, the meat industry produced more than 500 million additional rubles worth of output. During 5 months of 1984, 200,000 tons of meat, 43,000 tons of sausage products and also other food items were produced over and above the plan. This constitutes an important contribution by the APK partners towards the carrying out of the Food Program.

Unfortunately, despite the achievements in the carrying out of contractual agreements, we have still not achieved success in eliminating those instances where the cattle and poultry sales volumes called for in the contracts are not being fulfilled by individual farms. In particular, the percentage of such farms during the 1st quarter in the Kazakh SSR turned out to be 35 percent of their overall number, Georgian SSR -- 32, Azerbaijan SSR and Belorussian SSR -- 28 and in the RSFSR -- 27 percent.

And although the number of farms on the whole which did not fulfill their planned sales volumes for cattle and poultry during the 1st quarter is lower than that for the same period last year, nevertheless the data cited indicates that a great amount of work remains to be carried out in order to realize the absolute fulfillment of agreements by all of the farms.

Experience indicates that it is possible to solve such a task. This is borne out by the operational results of enterprises of the meat industry in the Estonian SSR which, jointly with kolkhozes and sovkhozes, rayon agroindustrial associations and republic and rayon goszagotinspeksiya's, succeeded in raising procurement discipline to the proper level. As a result, all 300 of the republic's farms having meat sales plans are carrying out their obligations in accordance with their contractual agreements.

In order to eliminate losses in live weight and ensure the timely processing of the cattle, considerable importance is attached to organizing systematic cattle deliveries by days of the month. Many oblasts in the Ukrainian SSR provide a good example of such organization. At the Ivano-Frankovsk Meat Combine, the cattle are delivered almost uniformly by days and months. Fine results have been achieved at the Slonim Meat Combine in the Belorussian SSR and by enterprises in the Lithuanian SSR, Latvian SSR, Estonian SSR and in a number of oblasts in the RSFSR. In the preparation of the calendar schedules for the deliveries and acceptance of cattle in these republics and oblasts, the parties to a contractual agreement base their actions upon the actual existing potential. The examination and approval of the calendar schedules for the delivery and acceptance of cattle and poultry within the rayon agroindustrial associations and goszagotinspeksiya's attaches to them the required degree of effectiveness and such schedules as a rule are carried out on a very strict basis.

However, there have been instances of properly coordinated schedules for the delivery and acceptance of livestock and poultry being violated. Thus, in the Kazakh SSR, Uzbek SSR, Kirghiz SSR, Turkmen SSR and in a number of oblasts in

the RSFSR, approximately 50 percent of the monthly volume of cattle is delivered during the third 10-day period of the month, while during the first half of the month the enterprises stand idle owing to an absence of raw materials. A serious shortcoming with regard to improving the organization of cattle procurements and deliveries for processing in these republics is the organizational separation which exists between the cattle procurement organizations within the system of agriculture and enterprises of the meat industry.

In the RSFSR, a large portion of the cattle procurements is carried out by enterprises of the meat industry and yet at the same time the procurement function is also carried out by fattening farms of the former Skotoprom system, farms which are subordinate to the USSR Minsel'khoz. Thus there are several cattle procurement agencies on the territory of RSFSR oblasts and rayons, the activities of which are still only weakly coordinated. As a result, control over the carrying out of contractual agreements is only formal in nature in many instances and this leads to numerous disruptions. Thus, in January the plan for cattle deliveries for processing purposes was not fulfilled in 12 oblasts, in February -- in 13 and in March -- in 16 oblasts, krays and autonomous republics of the RSFSR. Roughly 6,315 farms, or 27 percent of their overall number, did not fulfill their contractual agreement obligations during the 1st quarter. It bears mentioning that at the same time many farms over-fulfilled to a considerable degree their procurement and delivery plans for cattle. As a result, the RSFSR plan for cattle and poultry procurements for the 1st quarter of 1984 was on the whole over-fulfilled. These facts indicate that even when concluding contractual agreements, preparing calendar schedules for deliveries and acceptance and organizing their fulfillment, the true potential of the farms is not always taken into account, nor are the actions of the partners within the RAPO framework adequately coordinated.

A requirement obviously exists for concentrating the state purchases of cattle and poultry in the same hands throughout the entire territory of the RSFSR -- in the RSFSR Minmyasomolprom system. The enterprises of this ministry are more interested in planned deliveries of cattle raw materials for processing and experience reveals that the work proceeds best in those areas where the cattle procurement function is assigned to them. In particular, the acceptance of cattle on farms and their centralized shipping using the specialized transport equipment of the procurement agency are being introduced into operations considerably more rapidly. This is borne out by the experience of the Lipetskiy, Stavropol'skiy and Belgorodskiy and other associations. The procurement of cattle should also be turned over to the meat industry in the Uzbek SSR, Turkmen SSR, Tajik SSR and the Moldavian SSR. This will make it possible to have one procurement agency on the territory of a republic, which must be entrusted with complete responsibility for improving the organization of cattle and poultry procurements and implementing measures for lowering the transport-procurement expenses. At the present time, these expenses for cattle and poultry amount to approximately 200 million rubles annually, with insufficient use being made of the reserves which are available for lowering them.

During this 4th year of the five-year plan, the meat industry workers are confronted by important tasks concerned with expanding their contribution towards implementing the Food Program. More active cooperation in the use of

resources and abilities, which has come to the fore under the new administrative conditions, is opening up paths for solving many problems associated with the procurement and processing of cattle, poultry and rabbits. The obligations of leading collectives, adopted for the 4th year of the five-year plan, reveal the large reserves which are becoming available as a result of the socialist competition being held under the slogan "A Maximum Amount of High Quality Output From Each Ton of Processed Raw Material."

Today a most important task is that of ensuring the organized acceptance and processing of cattle without losses in all areas and carrying out more active work in connection with making more complete use of raw material resources, in the interest of fulfilling the planned annual tasks and eliminating the indebtedness of past years.

The further development of contacts between the meat industry and agriculture through the coordination of operational plans, rhythmic deliveries of raw materials and an expansion in the acceptance of cattle and poultry in the production areas and in their centralized shipments by means of specialized transport equipment will aid in successfully coping with the tasks assigned to the industrial workers.

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## LIVESTOCK

### CENTRALIZED LIVESTOCK, POULTRY DELIVERY SYSTEM REVIEWED

Moscow MYASNAYA INDUSTRIYA SSSR in Russian No 5, May 84 pp 1-4

[Article: "Speed Up the Rate of Introduction of the Centralized Transportation of Livestock and Poultry"]

[Text] In implementing the decisions of the May (1982) CPSU Central Committee Plenum, the enterprises of the meat industry in 1983 continued the changeover to the acceptance of livestock and poultry directly at the farms and their centralized transportation by specialized motor transport. As a whole for the country 3.2 million tons of livestock and poultry were accepted at kolkhozes, sovkhozes and other farms, which is 26 percent more than the 1982 level. The share of livestock, which were accepted at the places of production, came to 23 percent of the total amount of their delivery for processing. In 1982 this indicator was equal to 20 percent.

In all 150,000 tons of poultry were accepted directly at farms and transported centrally, which comes to 17 percent of its total delivery by kolkhozes and sovkohzes to meat and poultry combines. Enterprises of the meat industry of the RSFSR, the Ukrainian SSR, the Moldavian SSR and the Kirghiz SSR carried out the acceptance of poultry at farms. However, the RSFSR accounts for the bulk of the indicated amount of poultry--143,000 tons. The share of the centralized transportation of poultry in the RSFSR comes to 28 percent of the total processing, including 86 percent in Stavropol Kray, 64 percent in Krasnodar Kray and 43 percent in Tyumen Oblast.

In 1983 15,000 kolkhozes, sovkhozes and other farms, or more than a third of all the farms which have a plan of the sale of products to the state, carried out the turning over of livestock and poultry directly at the site.

Last year the meat combines of the RSFSR accepted at farms more than 642,000 tons of livestock and poultry, which is 78 percent more than in 1982. The meat combines of all the autonomous republics, krays and oblasts of the RSFSR, with the exception of the Tuva ASSR, as well as Arkhangelsk, Vologda, Sakhalin and Kirov oblasts, carried out the changeover to the acceptance of raw materials at the places of their production. As compared with 1982 the most significant increase of the acceptance of livestock at farms was achieved at the enterprises of the Tatar ASSR, Khabarovsk Kray, Vladimir, Orel, Astrakhan, Voronezh and Kaliningrad oblasts.

The introduction of measures on the improvement of the management of the agro-industrial complex contributed to the acceleration of the changeover to the acceptance of livestock directly at farms in the RSFSR. In particular, the transfer of the functions of the procurement of livestock in the majority of oblasts of the republic from the system of the All-Union Scientific Production Association for Beef Production and State Purchases of Livestock of the RSFSR Ministry of Agriculture to the jurisdiction of the meat industry, as well as the organization of new organs of management--agroindustrial associations--contributed to the mobilization of the efforts of the partners of the agricultural complex for the introduction of advanced forms of the organization of the procurement of livestock and the more complete utilization of the reserves and possibilities. Thus, in Lipetsk Oblast the garage of the former Skotoprom Association was turned over to the meat industry, which made it possible to increase the volume of the centralized transportation of livestock from 1,800 tons in 1982 to 31,100 tons in 1983. During 1982-1983 the Kaliningrad Oblast Agroindustrial Association turned over to the association of the meat industry 17 livestock carriers. Moreover, the transport of the Agricultural Equipment Association is being enlisted in the centralized transportation of livestock, a portion of the transport is being leased from large fattening farms. These steps made it possible in 1983 to haul 10,500 tons of livestock, which is 17-fold more than in 1982. Measures on the preparation of all farms for the delivery of livestock locally and the completion of the changeover to their centralized transportation in 1986 have been elaborated by the association of the meat industry and the oblast administration of agriculture.

The Orenburg Oblast Association of the Meat Industry jointly with the partners of the agroindustrial complex is performing much work on the introduction of centralized transportation. In practice the meat combines of the oblast began this work in April 1983. In July the oblast agroindustrial association specified the assignments on the centralized transportation of livestock from farms. The motor transport managements of the republic Ministry of Motor Transport were involved in this work. The oblast agricultural equipment association was commissioned to organize in the raw material zone of each meat combine detachments of specialized motor transport for the transportation of livestock from the farms. On the initiative of the workers of the association of the meat industry the readiness for the delivery of livestock locally was investigated at all the farms of the oblast. Conferences on questions of the implementation of the acceptance of livestock locally and their centralized transportation were held at six meat combines with the participation of representatives of agricultural organs, the state inspectorates for purchases and the quality of agricultural products and raw materials, as well as transportation organizations. As a result of the performed organizing work in 1983 8,900 tons of livestock and 2,700 tons of poultry were transported from 47 farms, which exceeds by 76 percent the established assignment.

The results of the work for 1983 were examined at the meeting of the presidium of the council of the agroindustrial association of the oblast, as well as at the meeting of the council of directors of enterprises of the meat industry. For the acceleration of the changeover to the acceptance of livestock at farms the oblast agroindustrial association commissioned the Oblast Agricultural Equipment Association in 1984 to equip 50 motor vehicles for the transportation of livestock. Moreover, it is planned to allocate 15 livestock carriers to the

Oblast Agricultural Equipment Association from the funds of agriculture. In 1985 it is planned to equip another 89 motor vehicles and to place at the disposal of the Oblast Agricultural Equipment Association 15 livestock carriers. With allowance made for this in 1985 the anticipated volume of centralized transportation will come to 50 percent of the total delivery of livestock for processing.

The work experience of Orenburg Oblast shows that it is possible to achieve the most significant scale of the introduction of the centralized transportation of livestock, wherever the possibilities of local motor transport organizations and motor pools are utilized more thoroughly. This conclusion is confirmed by the example of Khabarobsk Kray, where by means of the organization of hauling by the transport of the RSFSR Ministry of Motor Transport the volume of the acceptance of livestock at farms last year alone increased from 900 to 8,300 tons.

In spite of the fact that in many regions of the republic the rate of the changeover to the acceptance of livestock directly at the places of their production and centralized transportation are being successfully increased, as a whole for the RSFSR this work for the present is still at the initial stage. For the acceleration of the introduction of the advanced method of the procurement of livestock the workers of the meat industry of the RSFSR need to take urgent steps.

In the Ukrainian SSR in 1983 1,125,000 tons of livestock, or 40 percent of their total delivery to meat combines, were accepted directly at farms and were hauled by transport of the meat industry. This system of the acceptance of livestock has been introduced most extensively in Ivano-Frankovsk, Ternopol, Kharkov and Chernovtsy oblasts, where the centralized transportation of livestock comes to 60-70 percent and more. About half of the livestock being turned over for processing are hauled by transport of the meat industry in Dnepropetrovsk, Zaporozhye, Poltava and Cherkassy oblasts.

The transportation of livestock in the republic is being carried out mainly by the livestock carriers of the specialized garages of the Ukrmyasomoltrans Production Association. For providing assistance in the creation and development of the material and technical base of specialized garages in a number of oblasts--Ternopol, Khmelnitskiy, Kirovograd--on the initiative of the associations of the meat industry the motor transport managements of the Ukrainian SSR State Committee for the Supply of Production of Equipment for Agriculture have been involved in this work. The work experience of Ternopol Oblast showed that these steps make it possible to increase the coefficient of the technical readiness of livestock-carrying trucks, as well as the output per motor vehicle. Owing to the location of the vehicles in the motor transport managements of the rayon departments of the Agricultural Equipment Association, that is, in the immediate vicinity of the kolkhozes and sovkhozes, their deadhead runs to the sites of the loading of animals decreased.

The improvement of the operation of the specialized transport of the Ukrmyasomoltrans Production Association also promote the increase of the changeover to the acceptance of livestock locally and their centralized transportation. Thus, where as in 1982 848 tons were hauled by one livestock carrier, in 1983 905 tons of livestock were.

Last year in the Belorussian SSR 675,000 tons of livestock, or 71 percent of the total volume of delivery, were transported from 2,500 kolkhozes and sovkhozes, which make up 96 percent of their total number, by the specialized motor transport of the Belmyasomoltrans Production Administration of Motor Transport. In a number of rayons of the republic, for example, Brestskiy, Pinskiy and Mozyrskiy, more than 90 percent of the livestock being supplied to meat combines are delivered centrally. Constant work on the improvement and development of the centralized transportation of livestock is being performed by the republic Ministry of the Meat and Dairy Industry and meat combines together with other partners of the agroindustrial complex. Interdepartmental commissions with the participation of specialists of the meat industry regularly monitor the creation at farms of the conditions for the delivery of livestock locally and submit proposals on the further expansion and improvement of centralized transportation for the consideration of the corresponding executive organs and the councils of the agroindustrial associations of the oblasts and rayons.

The Belorussian SSR Ministry of the Meat and Dairy Industry and the Belorussian SSR Ministry of Agriculture have drafted a statute on the payment of bonuses to the driver-forwarding agents of the garages, in which along with the fulfillment of the production indicators the mandatory observance of the schedules of the acceptance of products is envisaged. The payment of bonuses to the drivers is submitted for approval to the administration of agriculture of the rayon soviet executive committees.

The introduction of the brigade contract in the centralized transportation of livestock yielded a positive impact at the Mogilev Specialized Garage. Three collectives, which assumed collective responsibility for the end results of the work, were organized. The council of the brigade specifies the schedule and traffic route of the vehicles. When tallying the results and distributing the material incentive of the members of the brigade the absence of interruptions of the runs, the fulfillment of the schedule of the going out of vehicles onto the line, the preservation of the skin cover of animals during transportation and the observance of labor discipline are taken into account.

The work on the technical supply of the garages of the Belmyasomoltrans Association with the necessary equipment and the supply of personnel for the maintenance and repair of motor vehicles is continuing in the republic. The organization of the operation of repair workshops during 1.5 shifts and in accordance with a continuous work week ensured the timely repair and the going out of transport onto the line.

In the past 2 years 12.2 million rubles have been assimilated for the development of the material and technical base of the motor transport enterprises of Belorussia, garages have been put into operation in Minsk, Lida and other cities. All this had a positive influence on the increase of the technical condition of the specialized motor transport which is engaged in the centralized transportation of livestock. The indicators of the operation of the specialized motor transport of the Belmyasomoltrans Production Association improved--the output per livestock carrier increased from 732 tons of livestock in 1982 to 855 tons in 1983.

In 1983 the changeover to the acceptance of livestock directly at the farms of the Uzbek SSR was begun. During the year 14,000 tons of livestock were delivered to meat combines by the meat industry's own transport, as well as by the enlisted common carrier truck transport. However, this is only the beginning of much and important work, for the present the share of the acceptance of livestock directly at kolkhozes and sovkhozes comes to only 7 percent.

The volumes of the centralized transportation of livestock from the farms of Alma-Ata, Dzhambul, North Kazakhstan, Taldy-Kurgan, Kokchetav and Kustanay oblasts in 1983 as compared with 1982 increased by two- to threefold. As a whole for the Kazakh SSR 108,000 tons of livestock were accepted locally, which is 47 percent more than the preceding year. This was achieved by the increase of the farms from 376 in 1982 to 478 in 1983 and the leasing of livestock carriers from kolkhozes and sovkhozes. However, in spite of the fact that the meat industry of the republic began this work many years ago, the achieved level is very negligible--only 11 percent of the total surrender of livestock by kolkhozes and sovkhozes is delivered centrally.

In Moldavia 42,000 tons of livestock were accepted directly at farms, which is nearly twofold more than in 1982. It is important to stress that the changeover to the acceptance of livestock at farms is being carried out in the republic in conformity with the interdepartmental comprehensive program which was approved by the Moldavian SSR Council of Ministers, which lends it a systematic, organized nature. The republic Ministry of the Meat and Dairy Industry is maintaining constant contact with the other ministries and departments of the agroindustrial complex. A broadcast, which promotes the advanced know-how of farms on the acceptance and centralized transportation of livestock raw materials, was organized over republic television. The Myasomoltrans Motor Transport Production Association was set up in the system of the republic Ministry of the Meat and Dairy Industry for the improvement of the maintenance and operation of specialized motor transport.

The acceptance of livestock directly at the farms of the Kirghiz SSR is being expanded. Last year 48,000 tons of livestock were transported by the specialized motor transport of meat combines and common carrier motor transport managements, which is 40 percent more than in 1982.

The meat combines of the Armenian SSR, the Georgian SSR and the Azerbaijan SSR have begun to accept more livestock directly at kolkhozes and sovkhozes and to transport them centrally (respectively 36, 34 and 22 percent of the total delivery of raw materials).

The number of livestock, which are delivered centrally from the farms of the Lithuanian SSR and the Latvian SSR, is increasing annually. In 1983 361,000 tons of livestock were transported by the transport of meat combines of Lithuania from kolkhozes and sovkhozes, which came to 71 percent of their total turning over; in Latvia respectively 158,000 tons and 48 percent. The motor transport managements of the State Committee for the Supply of Production Equipment for Agriculture are fully ensuring the centralized transportation of livestock in these republics.

The task of completing during the 12th Five-Year Plan the changeover to the acceptance of livestock and poultry directly at farms and their centralized

transportation, which was posed by the May (1982) CPSU Central Committee Plenum for industry, requires that henceforth the efforts on its realization be increased.

The assignment on the acceptance of livestock and poultry at farms in the amount of 4.6 million tons, which is broken down by ministries of the meat and dairy industry of the union republics, was established by the USSR Ministry of the Meat and Dairy Industry by the order "On Measures on the Increase of the Acceptance Directly at Farms of Livestock, Poultry and Milk and Their Centralized Transportation by Specialized Motor Transport in 1984." This assignment is 43 percent greater than the livestock actually accepted at kolkhozes and sovkhozes in 1982. Attaching great importance to this work, the ministry included the indicator of the acceptance of livestock and poultry directly at farms and centralized transportation in the Conditions of the Socialist Competition of the Collectives of Production Associations and Enterprises of the Meat Industry.

The results of the activity of the meat industry of the country during the first quarter of 1984 show that the enterprises of many union republics are achieving the significant acceleration of the changeover to the acceptance of livestock at farms. However, rates, which are adequate for the fulfillment of the annual assignments, have not yet been ensured everywhere. This pertains first of all to the enterprises of the ministries of the meat and dairy industry of the Ukrainian SSR, the Latvian SSR, the Kirghiz SSR, the Armenian SSR and the Estonian SSR.

Speaking at the April (1984) CPSU Central Committee Plenum, General Secretary of the CPSU Central Committee Comrade K. U. Chernenko stressed: "We have arrived at an extremely critical stage of the five-year plan, when the reckoning is taking place already by months. Moreover, the situation is not at all such that it would be possible to do without the further increase of the intensity of our economic work."

Managers and the corresponding services of the republic ministries, associations and enterprises of the meat industry need to analyze constantly the progress of the fulfillment of the assignments on the centralized transportation of livestock and poultry; to monitor the work of meat combines and specific workers, who are responsible for this section, checking whether everything was done that it is necessary to do, and whether the available reserves are being competely utilized; to identify the causes of shortcomings and omissions and to take effect steps for their elimination. At the conferences of workers of the industry, which have been held by the meat combines of a number of republics, as well as in the press the experience of the leading associations and enterprises on the acceleration of the changeover to the acceptance directly at farms and the centralized transportation of livestock and poultry has been covered quite extensively, the means of overcoming the arising problems have been thoroughly revealed. It is important to see to it that this experience would become a practical contribution wherever the introduction of centralized transportation is taking place at an inadequate pace. And, if necessary, to hold strictly accountable those who take a passive, wait-and-see position, do not make a search and do not display initiative.

Attention should be directed to the improvement of the operation of the motor transport which is being used for the centralized transportation of livestock and poultry. Frequently the shortcomings of material and technical supply, as well as the lack of coordination in the work of meat combines, motor transport managements, kolkhozes and sovkhozes still lead to disruptions of the schedules of the turning over and acceptance of livestock and poultry, above-standard layovers and the incomplete utilization of specialized motor transport. It is necessary to take without delay all steps on the elimination of these shortcomings.

The duty of the workers of the meat industry is to increase in every possible way the efforts for the accomplishment of the task facing the sector on the changeover to the acceptance of livestock and poultry directly at farms and their centralized transportation by specialized motor transport.

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## LIVESTOCK

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### SPECIALIZATION, BREEDING TECHNOLOGY IN HOG RAISING DISCUSSED

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[Article by Doctors of Agricultural Sciences V. A. Medvedev and I. S. Stupak, Doctor of Veterinary Sciences S. I. Serdyuk, Candidate of Economic Sciences A. P. Dryga and Candidate of Agricultural Sciences V. I. Skoryatina: "The Problems of the Development of Hog Raising"]

[Text] The problem of increasing the production of pork and improving its quality is being elaborated at the institute in conjunction with the consideration of the basic questions of the management of the sector. A long-range model of a specialized enterprise for pork production on its own fodder base is being formulated jointly with the Ukrainian SSR Main Administration of Animal Husbandry Products.

The questions of the specialization and concentration of pork production hold a significant place. The types, sizes and statutes on specialized farms, which include the sectorial structure of production, the peculiarities of the organization of the fodder base and an efficient system of the organization of labor, have been elaborated and substantiated in the Economics Department.

Specialized farms (kolkhozes, sovkhozes) and interfarm enterprises, which operate according to a complete production system, should be promising types in hog raising. It has been established that it is possible to achieve efficient organization at enterprises with a production volume of 12,000-24,000 quintals of pork a year and more given their own fodder base. At farms of this type the entire system of farming and fodder production should be aimed at the maximum production of fodders. For this purpose one should use 75-80 percent of the plowland. The commercial crops here are only technical, while in the Polesye zone there are also potatoes.

It is necessary to combine hog raising with dairy cattle breeding. Here the density of cows per 100 hectares of farm lands should not exceed 14-16 head in case of the sale of the young long-horned cattle in excess of the number necessary for replacement at the age of 15-20 days and 8-12 head in case of their sale at the age of 6-8 months.

For the increase of the soundness of the rations in the structure of the sown areas of the steppe and forest steppe zones it is necessary to increase the

share of cereals to 60-62 percent, including: winter wheat and rye--21-24 percent, spring and winter barley--16-18 percent, corn--8-10 percent and legumes--7-9 percent. In the structure of fodder crops the share of perennial leguminous grasses should come to not less than 42-45 percent.

Under such conditions the opportunity will appear to allocate per average annual female animal no less than 11,000-12,000 fodder units. Here during the summer period it is necessary to incorporate in the rations of the female population, replacement young animals and young animals being fattened up to 25 percent green mass of perennial leguminous grasses in order to decrease the share of cereals to 75 percent. During the winter period it is necessary to include in the rations 4-6 percent combined silage, 4-5 percent beets and 6-7 percent grass meal, which will also promote the decrease of the consumption of grain fodders. Given such a type of the feeding of hogs the land is used most efficiently. These proposals were obtained as a result of specially conducted studies with the use of computers.

The introduction in practice of specialized farms of the above-indicated sectorial structure of production, the structure of sown areas and the type of feeding makes it possible to produce 250-300 quintals of pork each for every 100 hectares of plowland. On this basis the specialized farms with a production volume of 12,000 quintals of pork should have 4,000-4,800 hectares of plowland; with a volume of 24,000 quintals of pork a year--8,000-9,600 hectares. At farms and complexes of such sizes the opportunity is afforded to introduce flow-line technology and the efficient organization of labor.

Methods of increasing the productivity of labor, which make it possible to decrease its expenditures at complexes of specialized farms and interfarm enterprises to 7-12 hr, which is one-fourth to one-third as much as at the bulk of farms, have been elaborated.

A one-shift continuous schedule of the workday, which creates more favorable conditions for attendants and satisfies the requirements of industrial production, has been proposed and introduced.

Two technologies, which differ in principle, have been proposed for industrial complexes. At the Trubezhskoy Sovkhoz Complex of Kiev Oblast, which produces 36,500 quintals of pork a year, a technology with the three-phase transfer and combined housing of animals in a group (21 each in a stall) has been introduced.

A technology with the two-phase transfer and the housing of animals at the breeding place from birth to the end of fattening is being used at the Rossiya Sovkhoz Combine of Cherkassy Oblast with a production volume of 24,000 quintals of pork a year.

A comparative appraisal of these technologies has been given. Higher indicators have been achieved at the Trubezhskoy Sovkhoz Combine. The average daily gain of animals in fattening comes to 600 g with the expenditure per kilogram of gain of 4.8 fodder units.

A new technology of the raising of replacement young hogs with the use of elements of industrial technology, which has been introduced at five breeding

reproduction farms with a production volume of 108,000 quintals of pork a year, has been developed and approved by the Ukrainian SSR Main Administration of Animal Husbandry Products. The breeding reproduction farms annually raise in accordance with this technology and turn over to industrial complexes 32,300 high-quality replacement young hogs with a live weight at 9 months of 128-132 kg.

The improvement of the technology of raising young hogs is promoting the steady increase of the production indicators of industrial complexes. In the past 6 years the average daily gains of young animals in fattening at enterprises with a productivity of 108,000 quintals of pork a year increased from 567 to 593 g, the expenditures of fodders per kilogram of gain decreased from 5.0 to 4.75 fodder units.

Steps on the improvement of the reproduction of sows at specialized farms and industrial complexes have been elaborated. Compounds, which ensure the stimulation and synchronization of heat and the increase of the reproductive ability of sows by 10-15 percent, have been developed jointly with the Institute of Physiology imeni A. A. Bogomolets of the Ukrainian SSR Academy of Sciences and the Ukrainian Scientific Research Institute of Endocrinology and the Chemistry of Hormones and are being introduced in production.

The studies of the Hog Raising Department on selection and breeding are aimed at the settlement of the questions, which are connected with the improvement of the breed composition of hogs, the improvement of the existing and the development of new highly productive breeds, types, lines and families of animals, which are fit for industrial technology, and at the development of effective systems of breeding, cross breeding and hybridization.

Highly productive breeding center herds have been developed at the breeding centers which breed hogs of the large white breed (the V. Buromka Breeding Center of Cherkassy Oblast, the Ukraina Breeding Center of Vinnitsa Oblast, the Chutovo Breeding Center of Poltava Oblast, the Breeding Center imeni Kalinin of Donetsk Oblast, the Ukrainka Experimental Breeding Farm of Kharkov Oblast, the Breeding Center imeni Litvinov of Voroshilovgrad Oblast). The live weight of the boars is 320-350 kg, the length of the body is 185-198 cm; the live weight of sows is 240-250 kg, the length of the body is 165-170 cm, the multiparity is 11.4-11.9 piglets, the milk yield is 62-65 kg (in 21 days), the average weight of the litter is 195-229 kg. The young animal in control fattening achieves a live weight of 100 kg in 175-190 days with an average daily gain of 720-780 g and the expenditure of fodders per kilogram of gain of 3.48-3.00 fodder units, the thickness of the fat is 25-30 mm.

A method of selective breeding according to the leading attribute has been development, which is making it possible to expedite the development of animals of specialized types and lines.

A highly productive breeding center type of animals of the large white breed with increased reproductive and productive qualities has been developed and already tested on the basis of this method at the V. Buromka, Ukrainka and Chutovo breeding centers. According to the 1983 judging data, the multiparity of sows came to 11.8 piglets, the milk yield--64 kg, the number of piglets at weaning in 2 months--11.1, the average weight of the litter--210 kg. The

young animal in fattening has high productivity (the data of control fattening): the age of the achievement of a live weight of 100 kg is 186 days, the average daily gain is 723 g, the expenditures of fodders per kilogram of gain are 3.89 fodder units, the thickness of the fat is 30.5 mm. In productivity the sows of the new type are 15 percent better than the sows of the leading breeding centers. Animals of this type are being used extensively at the breeding and commercial farms of the Forest Steppe Zone and Polesye.

The work on the breeding of a highly productive Ukrainian breeding center type of hogs of the Landras breed (the Belorechitskiy Breeding Center of Chernigov Oblast, the Ukrainka Experimental Farm and the breeding farm of the Kolkhoz imeni XXI s"yezda KPSS of Ternopol Oblast) and the Wales breed (the breeding farm of the experimental farm of the Scientific Research Institute of Animal Husbandry of the Forest Steppe and Polesye of the Ukrainian SSR) is being completed. The animals of these breeds are characterized by good adaptation to hot climates and have a strong constitution, high productivity and good combinability in case of crossing and hybridization. At the control and testing station of the Zarya kommunizma Breeding Center of Domodedovskiy Rayon of Moscow Oblast the average daily gain of a young animal of the Landras breed of this type came to 826 g (with respect to the best combinations--926-1,000 g), the expenditure of fodders on obtaining a gain of 1 kg--3.3 fodder units. The age of the achievement of a live weight of 100 kg is 171 days (with respect to the best combinations--144-155 days), the thickness of the fat is 28 mm.

The Hog Raising Department is coordinating the breeding work with animals of these breeds in the republic and the country.

In case of the improvement of breeds great importance is given to the development of new lines and families, the animals of which have high productivity. In recent years 6 new breeding center lines and 18 families in the large white and other breeds have been developed and tested.

Hogs of a new meat type (the kharkov'skaya selektsiya) have been obtained with the use of the complex reproductive crossing of animals of the Landras, Wales and large white breeds. At present there are more than 5,000 animals of this type, including 2,700 sows. They are being bred at 12 breeding farms of 6 oblasts of the Ukrainian SSR and the RSFSR. The animals are characterized by high productivity.

Boars and sows of the new type are being used extensively at the sovkhozes and industrial complexes of the republic for cross breeding and hybridization. More than 500,000 commercial breed and line hydrids are being obtained annually.

The Hog Raising and Biophysics Departments are implementing an extensive program of research and development of new methods and instruments, which ensure the increase of the intensity and effectiveness of the breeding of hogs. Methods of the evaluation while alive of the meat and fat qualities of a pedigreed young animal and the early diagnosis of the pregnancy of sows have been developed. All these developments have been accepted by the USSR Ministry of Agriculture, and the industrial production of the instruments has been started. Electronic scales, which ensure the automated gathering of information on the live weight of hogs, have been designed.

Research on the use of express methods of the determination of the qualitative indicators of the meat of hogs is being successfully conducted. At present express methods and instruments for the determination of the water-retaining capacity, the degree of coloration and the tenderness of meat are already available.

Cross breeding and hybridization are the most effective method of the breeding of hogs in commercial hog raising. In this connection a large amount of research has been devoted to the study of heterosis and its appearance in case of cross breeding and hybridization. The effectiveness of more than 50 combinations has been studied. It has been established that cross breeding makes it possible without additional capital investments to increase by 10-15 percent the productivity of hogs. A system of the breeding of animals with the extensive use of the cross breeding and hybridization of hogs was developed jointly with the Poltava Scientific Research Institute of Hog Raising (and was approved by the Ukrainian SSR Ministry of Agriculture) and has been introduced widely at specialized farms, interfarm enterprises and industrial complexes. About 7 million crossbreeds and hybrids are obtained annually at the farms of the republic. The total economic impact from the use of this method comes to more than 8 million rubles.

A method of the development of hybrids, which ensure under the conditions of large industrial complexes an average daily gain of live weight of 750-801 g and more, has been proposed (the Trubetskoy Sovkhoz Combine of Kiev Oblast).

Much has been done on the planning of breeding work in hog raising. Methods have been developed and, on their basis, long-range plans of breeding work in hog raising for the republic as a whole and for all 25 oblasts for the future have been drawn up jointly with the Poltava Scientific Research Institute of Hog Raising.

New organizational and technological methods of artificial insemination and a set of apparatus and equipment for this purpose have been developed and introduced in extensive production by the Laboratory for the Reproduction of Hogs.

These techniques will make it possible to obtain more than 90 percent of the ejaculates, which are suitable for use in accordance with health norms, including about 60 percent of those actually free of microorganisms, which it was not possible to achieve in case of the use of artificial vaginas, which were previously employed for the taking of sperm.

A method of the long-term storage of the sperm of boars in a deep-frozen state and a means of the freezing and thawing of the diluted sperm and its thick fraction have been developed, which ensures a 75-percent impregnation rate of sows.

A dummy for the taking of sperm from boars (SSKh-2) has been designed. Its use improves the veterinary health characteristics of the sperm. A set of equipment for the storage and transportation of sperm (the TE-3 fixed constant-temperature cabinet for the storage of sperm at a temperature of 7 to 17°C, the POS-5 thermal bag for instruments) has been developed. The equipment was tested extensively under production conditions and has been recommended for series production.

Research on the determination of the protein and amino acid nutritiousness of various fodder agents and their biological availability with allowance made for the production technology was conducted in the Feeding Laboratory.

Promising directions in the solution of the problem of increasing the quality of the protein in fodders and in the development of new approaches to the rate setting of protein were determined on the basis of much experimental material on the study of the metabolism and productivity of hogs being fattened and pedigreed hogs given a different level of protein in the rations and the use of different protein fodders.

The research showed that in case of the provision of hogs with the necessary amount of amino acids, an adequate energy level of feeding and its high value the amount of protein in the rations can be reduced by 15 percent as against the existing norms.

The established standards of the additions of synthetic amino acids (lysine, methionine and tryptophan) to the rations are making it possible to increase the average daily gains of hogs in fattening to 600-650 g with the simultaneous improvement of the quality of the carcasses.

The norms of the feeding of hogs of different sex-age groups with allowance made for the level of their productivity, breed peculiarities and physiological condition have been improved. Norms of the basic macroelements and trace elements, as well as vitamins A and D<sub>2</sub> for young hogs over 3 months old have been elaborated.

The Mixed Fodders Laboratory is performing much work on the increase of the biological value of fodder agents and their efficient use. Here a means of the processing of the grain of leguminous and cereal crops by the method of extrusion (for feeding to hogs) has been developed, due to which the biological value and availability of the nutrients of fodders increase by 15-25 percent. Here the extrudates of the grain of leguminous crops in protein nutritiousness are close to fodders of animal origin. Their inclusion in the composition of mixed fodders (20-24 percent by weight) makes it possible to replace for suckling pigs 50 percent of the fodders of animal origin and to obtain an average daily gain at the level of 300-350 g, while for piglets over 2 months old to replace them completely, ensuring in this case average daily gains within the range of 400-450 g, and in the group of young animals over 4 months old-- 600-700 g.

In case of such a means of processing grain ingredients it is possible to decrease the proportion of grain in mixed fodders by 25-35 percent by means of the inclusion of alfalfa meal (10-15 percent) and dry sugar beet pulp (15-20 percent of the weight of the mixed fodder), without decreasing the productivity of the animals. The obtained results have undergone production checking and have been included in the recommendations for production.

The research on the improvement and development of the technology of fodder distribution at the complexes of specialized farms and interfarm enterprises holds a significant place. An efficient mobile fodder distributor with a measuring devise for sties for sows was developed in the Mechanization

Department. It is also possible to use it in the shop for the raising and fattening of young hogs. The research has been completed and a fundamentally new technological line of the distribution of dry and moist fodders with the use of laterally moving troughs has been developed. Such a means of distributing fodders makes it possible to increase the feeding front and to use the area of the sties more efficiently (by 20-30 percent).

The construction of large hog raising complexes has aggravated the problem of the removal, storage and processing of manure. In this connection the Laboratory of the Mechanization of the Removal and Processing of Manure is developing technological lines and sets of machines for the removal and division into fractions of hog manure and discharges, as well as for their disinfection.

A technological line for the separation and purification of discharges, which underwent successful testing under the production conditions of the hog complex of the Druzhba Kolkhoz of Yakovlevskiy Rayon of Belgorod Oblast, has been developed. The introduction of the line makes it possible to purify more thoroughly 40 m<sup>3</sup> of discharges in 14 hours and to decrease the consumption of power.

A technological line for the disinfection of manure with anhydrous ammonia has been developed (jointly with the Ukrainian NIIEV [expansion unknown] and the Scientific Research, Design and Technological Institute of Animal Husbandry) and an experimental unit for the application of disinfected manure to the soil has been produced.

The use of the indicated technological lines and devices is making it possible to settle the questions of environmental production and at the same time to obtain organic mineral fertilizers, which ensure an increase of the harvest of agricultural crops by 25-33 percent.

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## AGRO-ECONOMICS AND ORGANIZATION

### STRENGTHENING ECONOMIC RELATIONS IN UZBEK APK ENTERPRISES

Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 84 p 13

[Article by Deputy Chairman of the Uzbek SSR Council of Ministers Bektash Rakhimovich Rakhimov, chairman of the Commission on Questions of the Agroindustrial Complex and a participant in the All-Union Economic Conference on Problems of the Agroindustrial Complex: "Uniting the Efforts of Partners"]

[Text] The oblast and rayon agroindustrial associations are aiming their activity at the more efficient use of material and manpower resources and the increase of the return of invested assets. Precisely the need for solutions of this problem was indicated at the All-Union Economic Conference on Problems of the Agroindustrial Complex.

The farmers of the republic in the production of cotton have reached the level of 6 million tons a year. The harvest of highly valuable fine-fibered varieties has been increased, although in the matter of improving the quality of raw cotton there are still many untapped reserves.

#### Discipline and Responsibility Are Increasing

The new organs of management are contributing to the successful accomplishment of the tasks of increasing the efficiency of agricultural production. In the republic 13 oblast and 159 rayon agroindustrial associations, to which kolkhozes and sovkhozes, various service organizations and industrial enterprises with a total number of workers of 2.2 million belong, have been formed and are in operation.

One of the most important questions, which has been placed at the center of attention of the councils of associations, is the strengthening of the economy of unprofitable farms and farms with a low profitability. A thorough analysis of the financial situation of kolkhozes and sovkhozes was made, specific steps on the provision of assistance were specified. In particular, markups on purchase prices have been established. Last year 165 million rubles were additionally paid to these farms, which made it possible to increase significantly the level of profitability of production. But there are still unprofitable farms. At present the republic commission and the councils of agroindustrial associations are carefully examining the production and financial activity of these collectives. Practical assistance in improving economic work is being given to them.

We are performing work which involves the concentration of financial assets in centralized funds. Current accounts of oblast and rayon agroindustrial associations for the creation and use of centralized production development funds, funds of sociocultural measures and housing construction and material incentive funds have been opened. These assets will be used for the financing of measures of an intersectorial nature. As a whole for the republic the centralized funds will amount to more than 70 million rubles.

Particular attention has been directed to the improvement of the style of work. It was important with the first step to rid ourselves of and to free the rayon associations from formalism and red tape, of which, we will be frank, there is enough in agriculture. The field and farm--these are the main workplace of the agronomist, the engineer and the livestock expert. More initiative, practical enterprise and great labor and executive discipline--these are what we require of the workers of all the services of the agroindustrial complex.

It is gratifying to note that the majority of oblast and rayon associations have been placed in precisely this practical frame of mind: without unnecessary meetings and written instructions. Such purposefulness and the concentration of forces on the key questions of the development of the rural economy are traced in the work of the Kara-Kalpak Republic Agroindustrial Association, the Surkhan-Darya, Tashkent and Fergana oblast agroindustrial associations and the Bukinskiy, Dzharkurganskiy, Akaltynskiy and Kattakurganskiy rayon agroindustrial associations. As a result, here current operations are being performed in a more organized manner and, what is the most important thing, the main directions in the development of the economy have been determined.

For example, the Samarkand Oblast Agroindustrial Association at the meetings of its council examines issues and adopts decisions on them, which are aimed at the increase of the production of output at kolkhozes and sovkhozes, the improvement of the activity of the rayon agroindustrial associations and the better use of the accumulated potential. The council of the association is purposefully engaging in the elaboration of proposals on the economic and social development of the oblast, the intersectorial cooperation of production, its specialization and concentration and on territorial distribution. On the initiative of the council of the association interfarm harvesting and transportation detachments for the harvesting of grain corn, as well as fodder-producing brigades which operate on a collective contract, first of all at the lagging farms, have been set up in many rayon agroindustrial associations. This experience has received extensive dissemination in the majority of rayons of the republic.

In conformity with a decision of the council of the Kommunisticheskiy Rayon Agroindustrial Association of Tashkent Oblast the production of ambary seeds on a cost accounting basis has been centralized in the rayon. Moreover, the council adjusted the internal construction title list of the leading interkolkhoz construction organization of the rayon (Interkolkhoz Mobile Mechanized Column No 98). Whereas previously here the share of construction operations for agricultural enterprises came to 45-50 percent, this year it will come to 70 percent, while in the future it is planned to increase it to 90 percent.

### Exercise One's Rights More Completely

But do the councils of the rayon agroindustrial associations always exercise extensively enough the rights granted to them? Far from always. Of course, the lack of experience of the specialists of associations tells. It is impossible not to consider this. But the basic reason lies in the inadequate activeness and efficiency of new organs. The lack of confidence and timidity of some workers of associations are connected with a poor knowledge of the standard documents, and at times with the inertia of thought. For example, far from all councils of the rayon agroindustrial associations examine and approve the plans of the work of service organizations and exercise poorly the right to revise the prices and rates for services. Partly because the partners continue to proceed first of all from their own departmental interests and do not consider the needs of managements. Not everywhere do the specialists of associations investigate the economy of the sectors of the agroindustrial complex.

In every rayon there are farms, at which the standards of farming and animal husbandry are low, the proper work on the observance of the regulations of agricultural technology is absent, the work of the economic services has been poorly organized. The council of the rayon agroindustrial association is a collective, democratic organ, which acts in the interests of kolkhozes and sovkhozes. Therefore a precise program of the elimination of the bottlenecks and disproportions, which decrease the effectiveness of the use of the created potential, should exist in the agroindustrial association.

The basic sphere, in which militancy and the possibilities of agroindustrial associations should especially appear, is intersectorial relations. One of the main tasks of the rayon agroindustrial association is to coordinate economically the interests of service organizations with the needs of kolkhozes and sovkhozes. As is known, enterprises and organizations, which are subordinate to different departments, belong to the rayon agroindustrial association. The coordination and organization in their work has now become greater.

The workers of the Agricultural Equipment Association are more and more often taking upon themselves concern not only for the fulfillment of the repair plans, but also for the maintenance of the great readiness of machines at the farms. We are disseminating extensively the experience of individual associations of the rayon agrochemical services to agriculture, which have assumed the comprehensive agrochemical service of all agricultural lands. This is making it possible to determine their influence on the end results in plant growing.

And still the relations of agriculture with service organizations in a number of places remain complicated. At times conflicts and misunderstandings arise, the departmental costs make themselves felt. Suggestions to broaden the rights of rayon agroindustrial associations are being expressed in private conversations with the managers of the new organs and at the meetings of the republic commission. It is expedient, for example, that it would concentrate completely in the association the capital investments and material resources for the development of the agroindustrial complex of the rayon.

The party has posed the task to achieve the above-plan increase of labor productivity by 1 percent and the decrease of the product cost by 0.5 percent. For

the kolkhozes and sovkhozes of the republic this means to produce additionally gross output worth 51 million rubles and to derive a profit of 27 million rubles. The assimilation of advanced forms of the organization and remuneration of labor, first of all the collective contract, will contribute to the accomplishment of this task.

About 35,000 cotton-growing brigades and links, which were formed strictly on a voluntary basis and which work according to the method of the collective contract, have been set up in the republic. The new method has received extensive dissemination (more than 80 percent of the total number of brigades) at the farms of Surkhan-Darya, Syr-Darya and Tashkent oblasts.

In Surkhan-Darya Oblast, where the collective contract has been introduced in all the sectors of farming, the net income of kolkhozes has increased as compared with 1981 by 1.8-fold, labor productivity has increased by 11 percent. At the sovkhozes each ton of cotton yielded a profit of 453 rubles, the aggregate profitability comes to 46.2 percent.

However, proper attention is not being devoted everywhere to the collective contract. At a number of farms of Dzhizak Oblast and the Kara-Kalpak ASSR they have limited themselves to the creation of two or three contracting brigades. Moreover, the managers at times reduce everything only to the drawing up of contracts. Such an attitude discredits the very essence of the advanced organization of labor.

We have posed the task to change over all labor collectives by the end of the five-year plan to advanced forms of the organization and remuneration of labor. For this we are stepping up the work of the councils and the bureaus of economic analysis and are introducing accounts of economy in every labor collective.

The working people of Uzbekistan are striving to provide this year as well not less than 6 million tons of cotton and to increase its quality substantially. It has been decided to sell 2.95 million tons of grain to the state, including 565,000 tons of rice. In all 360,000 tons of meat, 1.02 million tons of milk and 1.17 billion eggs have to be sold. Such will be the contribution of the republic to the fulfillment of the Food Program of the country.

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## AGRO-ECONOMICS AND ORGANIZATION

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### NEED FOR IMPROVED ECONOMIC EFFICIENCY IN APK BRANCH RELATIONS

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 6, Jun 84 pp 26-31

/Article by A. Zavgorodniy, candidate of economic sciences and deputy chief of the Main Administration of the USSR Ministry of Agriculture: "Economic Relationships Among APK Branches"/

/Text/ In conformity with the decree of the USSR Council of Ministers entitled "On the Order for Planning and Logistical Supply Within the System of the USSR's Agroindustrial Complex," the activity of enterprises, associations and organizations and the system of ministries and departments included in the structure of the country's agroindustrial complex is planned today as a united whole with a breakdown by branches. A new system is in operation for making control figures for the draft five-year plans for the economic and social development of the agroindustrial complex and its branches available to the union republic councils of ministers and to the USSR ministries and departments and also for developing the draft five-year and annual plans for a rayon, oblast, kray, republic and for the country. In the process, priority is assigned to the kolkhozes and sovkhozes -- the principal elements of the agroindustrial complex. Thus, for example, the enterprises and organizations which service agriculture form their own plans based upon the requests of the kolkhozes and sovkhozes and other state agricultural enterprises, organizations and associations.

During the formation of the requests for logistical resources and the distribution of the funds allocated for agricultural needs, a substantial increase takes place in the role played by the councils of agroindustrial associations. The requests of kolkhozes, sovkhozes and other agricultural enterprises for logistical resources, prepared in the established manner and in accordance with the appropriate nomenclature, are coordinated with the rayon, oblast, kray and republic (ASSR) agroindustrial associations. Such a measure exerts a positive effect with regard to improving the balanced nature of the plans and also mutual coordination in the work of the branches. The plans of enterprises and organizations attached to agroindustrial associations have begun to respond more to the needs and requirements of agricultural production, which is the chief element of the APK /agroindustrial complex/.

The USSR MSKh /Ministry of Agriculture/, on a special purpose basis, has allocated capital investments and logistical resources for carrying out an experimental check under production conditions on progressive technologies for

the cultivation of agricultural crops, the maintenance of livestock, ensuring the preservation and processing of products and for the production of seed for deficit varieties and hybrids. Certain other measures are being implemented aimed at improving the system of planning and logistical supply within the USSR agroindustrial complex.

An exceptionally important role will be played by the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "On Improving Economic Relationships Between Agriculture and Other Branches of the National Economy," which calls for an increase in responsibility for those enterprises and organizations providing services for kolkhozes, sovkhozes and other agricultural enterprises and organizations, for an increase in the production and procurements of agricultural products and for improvements in the quality and schedules for the carrying out of work and services. At the same time, these enterprises and organizations are now displaying greater interest in achieving high final results and growth in the economic efficiency of agricultural production.

Some other measures are also being undertaken aimed at raising the responsibility and interest of the procurement and other enterprises and organizations which provide services for agriculture, with regard to achieving high final results in the production of agricultural products and goods obtained from the processing of such output and also in ensuring the timely and high quality delivery of the products to the consumers. For example, the USSR Ministry of Procurements and the USSR MSKh have approved a new statute on the system for concluding and executing contractual agreements for agricultural products and also standard contractual agreements.

The mentioned statute and agreements called for measures aimed at raising the responsibility of the procurement organizations for the acceptance of all agricultural products presented by the farms and their preservation and that of the kolkhozes and sovkhozes -- for the quality of the products sold to the state. For example, for refusing to accept products delivered to the receiving point within the period called for in the agreement, the procurement specialist must pay the farm a fine amounting to 3 or 5 percent (depending upon the type of product) of the value of the products which were not delivered or not accepted. In addition to the fine, the procurement specialist makes payment to the farm for the losses it sustained and in the case of highly perishable products -- for their full value and also for the farm's expenses for transporting them at both ends. For the non-fulfillment of contractual obligations with regard to acceptance of the products directly at the farm and for shipment by his own transport, the procurement specialist pays a fine in the amount specified above for the transport expenses of the farm. It bears mentioning that the farm also bears a definite amount of property responsibility vis-a-vis the procurement specialist for the non-fulfillment or improper fulfillment of obligations as set forth in the contractual agreements.

In the system of measures for further raising the efficiency of the entire agroindustrial complex and creating the conditions required for successfully carrying out the Food Program, a special role is played by improvements in the administration of agriculture and other branches in the agroindustrial sector of the country's economy.

At the present time, new organs have been created throughout the country for the administration of agriculture and other branches of the agroindustrial complex -- agroindustrial associations. Such associations are in operation in 3,105 rayons and 157 oblasts, krays and autonomous republics.

Councils have been formed for the agroindustrial associations. Moreover, the chairmen of kolkhozes and the directors of sovkhozes, throughout the country as a whole, constitute a majority among the overall number of members of RAPO /rayon agroindustrial association/ councils. This feature is of basic importance in that it assigns a priority to the interests of the kolkhozes and sovkhozes in the councils.

It bears mentioning that the new system that has been created for administering all branches of the agroindustrial complex will contain a qualitatively new organizational and economic mechanism of management, which calls for unified and coordinated guidance for the enterprises and organizations belonging to an agroindustrial association, improvements in their economic relationships and the creation of material interest in the final results of their labor. The new organs of administration have been provided with effective economic levers.

The results of the initial year of activity by the new organs of administration reveal a whole series of positive trends which are promoting the successful carrying out of the Food Program. The agroindustrial associations are presently devoting special attention to the problems concerned with coordinating the work of all enterprises and organizations in the complex and orienting them mainly towards improving production-technical services and logistical supply for agriculture, the unconditional fulfillment by all of the kolkhozes and sovkhozes of the planned tasks for procuring agricultural products and improving their quality, improving the economies of unprofitable and low profitability agricultural enterprises and the introduction into production operations of advanced technologies and progressive forms for organization and wages.

Included among the examples of skilful organization of the work of the new organs of administration are such RAPO's as Bershad in Vinnitsa Oblast, Petrovskiy in Stavropol Kray, Kalmanskoye in the Altay Kray, Glazunovka in Orel Oblast, Novomoskovskiy in Tula Oblast, Pochev in Bryansk Oblast, Ilishevskiy in the Bashkir ASSR, Vileyka in Minsk Oblast and many others.

In carrying out the tasks assigned to the new organs of administration, a great amount of work will be carried out by the council of the Bershad RAPO in Vinnitsa Oblast. The work volumes for enterprises of Sel'khoztekhnika for the capital and current repair of machines, equipment, units and assemblies and the work volumes for servicing the equipment of kolkhozes, sovkhozes, enterprises and organizations belonging to the association have been examined and approved for 1984 based upon the requests of the farms and in keeping with the logistical resources allocated.

The summary plans for providing agrochemical services for farms in the region and for the carrying out of contractual construction-installation work have been examined and approved, the work volumes for the cleaning and repair of the aquicultural land reclamation network have been established and work has been completed on the tasks for placing in operation fixed capital and productive capabilities.

The prices and rates for a majority of the work and services performed for kolkhozes and sovkhozes in the region by Sel'khoztekhnika enterprises and for all of the principal types of work and services carried out by Sel'khozhimiya have also been approved.

For the preparation and preliminary discussion of recommendations called for by the RAPO council, seven inter-branch committees were created: for production, procurements and the processing of field crop husbandry and animal husbandry products; feed production, mechanization, electrification and logistical support; for the problems concerned with improving economic relationships; rural construction; for cultural-domestic services for the population and planned financial work. The committee's staff included specialists from the rayon agricultural administration, kolkhozes, sovkhozes and enterprises and organizations of the association. As a rule, the committees were headed by specialists from the rayon agricultural administration -- the working staff of the RAPO council. A Department for Inter-Branch Relationships and Planning, consisting of six individuals, was created within the staff structure for the agricultural administration.

The RAPO council solves many problems associated with improving the work of those enterprises and organizations which provide services for the kolkhozes and sovkhozes. Work is being carried out aimed at improving the organization of repair work on agricultural equipment, while taking into account the efficient use of the workshops of kolkhozes and sovkhozes. The rayon's farms have at their disposal 18 standard and five suitable repair workshops and 23 technical services points. By the end of 1985, the plans call for construction to be completed on standard repair workshops at all 26 of the kolkhozes and sovkhozes. In 1984, all capital and current repair work on grain harvesting combines and 70 percent of the capital and 85 percent of the current repair work on tractors will be carried out directly on the rayon's farms. Raysel'khoztekhnika has a specialized workshop for the repair of T-74 tractors. Its remaining repair base is used mainly for the repair of units and assemblies and for the restoration of worn out parts for kolkhozes and sovkhozes.

Raysel'khozhimiya is organizing its operations in conformity with a program which was approved based upon requests by the rayon's kolkhozes and sovkhozes. It furnishes assistance to the farms in training personnel in the application of mineral fertilizers and in the use of toxic chemicals.

Special attention is being given to the problems concerned with lowering the prices and rates for work and services performed for the kolkhozes and sovkhozes by service enterprises and organizations. Thus, compared to 1981 when the average cost for applying organic fertilizers was 19.8 rubles per hectare, in 1984 -- 9.7 rubles. In 1984, as a result of a reduction in the prices and rates for individual types of work and services and improvements in the organization of repair work and technical services, the costs of the kolkhozes and sovkhozes will be reduced by more than 100,000 rubles and overall expenditures for equipment repair work will be reduced by almost twofold.

Work is being carried out in connection with organizing the timely acceptance and high quality processing of all products grown by farms in a rayon. Owing to the absence of the capabilities required for accepting and processing the fruit and vegetable products, the rayon's kolkhozes in 1983, according to the

estimates of farm specialists, failed to receive approximately 250,000 rubles for products which were raised but not sold. At the present time, in response to initiative displayed by the RAPO council, the construction of a canning department with a capability for producing 5 million standard tins annually is being completed in the rayon.

The RAPO council and its working staff have developed a complex of measures aimed at increasing production, raising the quality of the sugar beets and reducing losses during the processing of the beets. Towards this end, training was organized throughout the rayon for the machine operators and specialists of farms and sugar plants, with scientists and leading production workers participating in this work. In 1983, with the aid of the RAPO council, storehouses with forced ventilation and a capacity for 55,000 tons and also hard surface platforms for 3,000 square meters were additionally built at the sugar plants using their resources. As a result of the work carried out and other measures, success was achieved in raising the sugar content of the beet roots on farms throughout the rayon from 16 percent in 1982 to 17.4 percent in 1983. For the increase in sugar content, the plants additionally transferred over to the plants approximately 1.6 million rubles. In addition, 17.8 percent more sugar was obtained in 1983 than in 1982 as a result of improvements in the quality of the beet raw materials and a reduction in losses during their storage.

Constant attention is being given to the problems concerned with organizing the acceptance of products by the procurement enterprises directly on the farms. Thus the Bershad Inter-Rayon Dairy Combine raised the centralized shipping of milk in the rayon to 90 percent. The quality indicators for the milk turned over were raised as a result of the implementation of a number of measures: improvements in the organization of milk procurements, better support for the marketable dairy farms in the form of equipment and necessary materials, improvements in the skills possessed by farm laboratory workers and others. The rayon's farms obtained 1,353,000 additional rubles merely as a result of having supplied the state with 1st grade and cooled milk. Taking into account the action of other factors, this aided in raising the profitability level for dairy animal husbandry to 27.3 percent.

Prior to the organization of the RAPO, the rayon's farms shipped their livestock and poultry by means of their own transport equipment. Following its creation, 42 percent of the livestock and poultry were being shipped to the meat combine on a centralized basis by 1983 and this year the plans call for this indicator to be raised to 60 percent.

Centralized funds were created in 1983: material incentives -- 213,000 rubles, social-cultural measures and housing construction -- 266,000 rubles and production development -- 1,265,000 rubles. In all, a total of 1,744,000 rubles. The norms for adding resources to these funds and also the principal trends for their use were developed and approved.

It bears mentioning that under the RAPO operating conditions the work of developing inter-farm cooperation was activated considerably. A number of facilities of this type are operating at the present time in the rayon: inter-farm poultry factories, an enterprise for the fattening of livestock using

pulp from sugar plants, a biological factory, mezhkolkhozstroy /interkolkhoz construction organization/ and others. The construction of a hothouse combine for an area of 10,000 square meters was started based upon the thermal waste products of an electrical engineering plant, cooperation in the use of farm resources and a centralized fund for the development of the association. The plans for 1984-1985 also call for the construction of an inter-farm sanatorium-dispensary for 150 patients using the resources of enterprises and organizations attached to the agroindustrial association and a portion of the centralized funds of the RAPO.

The council of the rayon agroindustrial association is devoting attention to such problems as the introduction of the collective contract, employing industrial technologies in the cultivation of agricultural crops, improving economic operations in the rural areas and introducing cost accounting procedures at the kolkhozes and sovkhozes.

In addition to other factors, the work carried out by the Bershadskiy Rayon Agroindustrial Association is serving to ensure that the kolkhozes and sovkhozes will achieve high final results in their agricultural production. Gross agricultural output in 1983 increased by 12.8 percent compared to the level for 1982 and by 2.6 percent compared to the average annual level for the 10th Five-Year Plan; labor productivity increased by 16.9 and 13.4 percent respectively. The profitability level for agricultural production reached 48.3 percent last year, or higher by almost threefold than that for the 10th Five-Year Plan. The profit (net income) of the kolkhozes, sovkhozes and inter-farm enterprises amounted to more than 32 million rubles, including 7.5 million rubles in the form of bonuses added on to the prices for the agricultural products. At the present time, there is not one unprofitable or low profitability farm in the rayon. In accordance with the results of the all-union socialist competition for 1983, the rayon was awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee.

An analysis of the results of the initial and the beginning of the second year of operations by the new organs of administration reveals that they were created on a timely basis, that they are economically sound and that they are exerting an active influence on the successful carrying out of the Food Program.

However, further improvements in economic relationships between the APK branches and improvements in the administration and system of planning for a single national economic complex in this important sector are viewed as being of exceptional importance at the present time. "Relying upon the best experience" commented Politburo Member of the CPSU Central Committee and Secretary to the CPSU Central Committee M.S. Gorbachev, during an all-union economic conference, "we must in the future implement further improvements in the administration of agriculture and other branches of the agroindustrial complex. We must continue to search for new forms and methods for management within the APK sphere."

The measures aimed at improving the efficiency of the APK branches are broad and specific. However, in order for them to be implemented successfully, further improvements are required in the work of the new organs of administration, harmonious and purposeful work by all elements of the agroindustrial complex.

At the same time, analysis has shown that many agroindustrial associations, in the carrying out of their practical work, are not making full use of the broad rights and opportunities extended to them with regard to planning the volumes of work and services provided to the kolkhozes and sovkhozes by service enterprises and also the establishment of the rates and prices for the majority of them, the creation of centralized funds, determining the conditions for awarding bonuses to the workers of service enterprises and organizations and failing to use the rights extended to them for controlling the work of enterprises and organizations attached to the association. Many RAPO councils are only slowly solving the problems concerned with coordinating the work of enterprises and organizations included in the association.

Improvements are required in the organizational forms for the work carried out by the councils of agroindustrial associations. There have also been incidents of RAPO councils providing secondary support for kolkhozes and sovkhozes, thus paralyzing their independence and initiative.

The operational style and methods of many rayon agricultural administrations, as working organs of the councils of agroindustrial associations, have not undergone substantial changes. In a number of administrations, departments (groups) have still not been created for inter-branch relationships and planning, for the procurement, marketing and processing of agricultural products or for labor and social problems. The staff structures consist mainly of technological specialists and this determines to a considerable degree the nature of their activities.

Many workers attached to agroindustrial associations and their working staffs and also the leaders and specialists of kolkhozes, sovkhozes and other enterprises and organizations included in the structure of associations have only weakly mastered the principal conditions of those normative documents which regulate the activities of the new organs of administration.

One serious cause of this situation is the fact that some union and republic ministries and departments are acting in a sluggish manner in organizing their activities in conformity with the new conditions. The departmental approaches for solving many problems concerned with development of the APK are by no means being eliminated to the degree required. In many instances, the resources allocated are not being utilized completely and consideration is not being given to their concentrations or to the direction to be followed for eliminating bottlenecks and disproportions. In particular, this is being manifested in connection with the procurements and processing of agricultural products. Despite the fact that the availability of storehouses for potatoes, vegetables and fruit, as is well known, is just slightly more than 50 percent, the annual increase in new capacities is still negligible. This same situation prevails in the case of the processing of animal husbandry products.

Direct contacts between the procurement specialists on the one hand and the kolkhozes and sovkhozes on the other are being developed only weakly and in many areas the conversion over to accepting the products in the production areas and shipping them using the transport equipment of the procurement organization are being dragged out.

Large numbers of livestock are still being transported over hundreds of kilometers for slaughtering and processing purposes and this leads to the inefficient use of transport equipment, considerable losses in product and in the final analysis -- large unproductive expenditures of state resources.

In 1983, for example, enterprises of the USSR Meat and Dairy Industry accepted directly on the farms and shipped by means of their own transport equipment only 23 percent of the livestock purchased and 25 percent of the milk. In the Uzbek SSR, the Moldavian SSR, Tajik SSR, Kazakh SSR, Azerbaijan SSR and in a majority of the oblasts in the RSFSR, from 2 to 6 percent of the animals subject to sale to the state for meat purposes are being accepted in the production areas. At many of the meat combines, proper conditions have not been created for the pre-slaughtering maintenance of the animals, they are being held over at the slaughtering bases for longer than the established periods and this leads to large losses in meat and to a reduction in quality.

Some union and republic ministries and departments are continuing to provide their subordinate enterprises and organizations, which provide services for the kolkhozes and sovkhozes, with planning indicators for work and service volumes and for obtaining profit, without taking into account the requirements of the farms or their examination by the RAPO councils.

Thus the profit plan for 1984 for technical servicing stations of Rossel'khoztekhnika increased by 23.9 million rubles compared to 1983, or by 70.5 percent. For the Goskomsel'khoztekhnika system overall, the profit plan for the current year was established at 105.3 million rubles, or 17 percent more than was actually obtained in 1982, with an increase in the volumes of work and services of only 6 percent.

Some rayon enterprises of Sel'khoztekhnika are not providing quality repair work or technical services and overhead expenses constitute a large portion of the structure of expenditures for repair work carried out on the farms.

There have also been incidents of illegal withdrawal of funds from the kolkhozes and sovkhozes and mistakes made in the volumes of work carried out. In Belgorod Oblast, for example, it was established last year that approximately 23 percent of the tractors checked had been repaired in a poor quality manner. The overhead expenses for the repair workshops of oblsel'khoztekhnika, computed on the basis of a unified method, amounted to an average of 242 percent, compared to 35-40 percent at the kolkhozes and sovkhozes. Last year the Kozelskiy Raysel'khoztekhnika in Kaluga Oblast tolerated additions to its work volumes for the technical servicing of machines in animal husbandry amounting to 14,500 rubles. In 1983, the Bilyarskiy Raysel'khoztekhnika in the Tatar ASSR illegally obtained 7,900 rubles as a result of a payment for spare parts delivered to kolkhozes and sovkhozes for tractors and agricultural machines, with the payment being shown as tendered for repair work carried out. Only subsequently were these funds returned to the farms. Over the past 3 years in Sverdlovsk Oblast, the Beloyarskiy Raysel'khozkhimiya inflated its work volumes for the liming of acid soils by more than 3,000 hectares and the Kamenskiy Raysel'khozkhimiya -- by 3,700 hectares. Unfortunately, many such examples can be cited.

Many leaders of service and processing enterprises and organizations are continuing to be guided by old departmental instructions and rules, which to a considerable degree are in conflict with those normative documents which define the nature of the work to be performed by the new organs of administration. This applies to the problems concerned with planning, the creation of economic incentive funds, the establishment of rates and prices for services rendered and so forth. Thus USSR Tsentralsoyuz Central Union of Consumers' Societies has forbidden its organizations and enterprises to participate in the creation of a centralized fund for developing the production of RAPO's. Such a prohibition is aimed at the sites of the RSFSSR Minmyasomolprom Ministry of the Meat and Dairy Industry, Minvodkhoz Ministry of Land Reclamation and Water Resources for the Ukrainian SSR and the republic association of mezhkolkhozstroy for the Belorussian SSR. The USSR Ministry of the Fish Industry has issued an instruction to its enterprises and organizations concerning withdrawal from agroindustrial associations.

It is obvious that this not only minimizes the role played by the councils of agroindustrial associations, but in addition it prevents them from making full use of the rights extended to them for regulating inter-branch relationships and it lowers the effectiveness of the economic mechanism within the agroindustrial complex.

At the same time, the experience accumulated in the functioning of the agro-industrial complex reveals that improvements in the efficiency of its operation require solutions for an entire series of problems concerned with improving the economic relationships among the APK branches.

For example, numerous proposals have been made calling for the problems concerned with the planning of capital investments and the distribution and redistribution of logistical resources among the enterprises and organizations included in the structure of an agroindustrial association, regardless of departmental subordination and in the absence of coordination with the higher organs, to be turned over to the agroindustrial associations.

Questions are being raised concerning the need for accelerating the preparation of proposals for creating a single construction service for the rayon and oblast agroindustrial associations, temporary structures and staffs, the development of a statute for a single engineering service in agriculture and instructions on a system for creating and using the resources of the centralized fund for the development of agroindustrial associations and so forth.

In the interest of achieving rapid solutions for these and some other problems, a definite amount of work has already been carried out by specialists of the Main Administration for APK Problems, jointly with workers from other structural subunits of the USSR MSKh Ministry of Agriculture and also interested ministries and departments.

Further improvements in economic relationships among APK branches and the elimination of existing shortcomings in this work will promote the successful carrying out of the Food Program.

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AGRO-ECONOMICS AND ORGANIZATION

COMPENSATION TO CITY WORKERS FOR HARVEST ASSISTANCE

Moscow TRUD in Russian 18 Jul 84 p 4

[Unsigned article: "City Dwellers at Harvesting"]

[Text] Every year we travel to agricultural regions to assist in harvesting and procuring farm products and feeds. We have to work without regard for time. We would like to know what conditions will be offered to enterprise workers sent to do this work in 1984 and whether compensatory leave will be given for overtime worked and for work on days off.

Machinery operator V. Semochkin,  
Volgograd

Driver N. Kolesov, Donetsk Oblast

In accordance with decisions by the councils of ministers of the Union republics, tractor, machine and other equipment operators sent to perform farm work in 1984 at the time of the most intensive agricultural work in the kolkhozes and sovkhozes retain 75 percent of their average wages at their prime place of employment during the entire period away from the job (including travel time).

The average wage of motor vehicle drivers sent to haul grain, other farm products, silage and haylage is also retained at the same level, but not below the tariff scale. When vehicles are dispatched under their own power (for distances under 1,000 km), the drivers retain their average wage for the time allowed by traffic schedules. Seventy-five percent of the wages (but not below the tariff scale) is also retained by maintenance workers, mechanics, truck transport column chiefs, dispatchers and other workers sent with the truck columns. In addition they retain their average wages for all working days on the assignment (besides the 75 percent in lieu of per diem and lodging), if these workers were not credited with wages for the work done at the place they were sent.

In view of the retention of 75 percent of their average wages by the workers indicated, they are not paid per diem or lodging costs. Of course, they are compensated for travel costs to the place of temporary work.

In addition to the 75 percent of their average wages, the workers listed also retain 100 percent of their average wage during travel time (for working days according to the work schedule at their prime place of employment), and tractor, machine and other equipment operators also for the first three days upon arrival at the sovkhoz or kolkhoz. This means that 175 percent of the average wage at the prime place of employment is paid during time en route.

Workers are paid 75 percent of their wages in lieu of per diem and lodging when due to travel conditions and the nature of the work performed they are unable to return daily to their permanent residence. In each specific case this question is decided by the superior at the prime place of employment of the worker dispatched, taking into account the distance sent, transport conditions, nature of the work performed, as well as the necessity of providing rest facilities for the worker.

It should be supposed that the last factor is the decisive one. If the machinery operator or driver finishes work late and begins it early, then rest should be organized locally (at the farming enterprise) with a payment of 75 percent of the average wage. If the administration decides that with all the listed conditions the worker is able to return home, but remains at the temporary work place at his own desire, then he is reimbursed for housing expenses. These workers are not issued travelling credentials and do not retain 75 percent of their average wages.

Sums in lieu of per diem (75 percent of the average wage) are also retained by the worker on travel assignment in case of illness in the agricultural work area, until his health condition permits the beginning of work or a return home (but not over two months). The illness of the worker or his inability for this reason to return home must be documented through established procedures in a medical certificate.

The wages of machinery operators at the place they are sent are paid for the amount of work performed in accordance with established rates. They may be paid bonuses by the sovkhoz director for well-performed work within the established schedule or ahead of it. The bonus amounts are up to 20 percent of their earnings credited for work performed. The bonus amounts may be increased to 40 percent for the performance of fixed work output tasks established on the basis of intersectorial, sectorial or other more progressive labor norms.

Wages for drivers are paid in accordance with conditions established for them, with additional bonus credits. The work requirements to be performed during shifts are determined in accordance with the procedures established for motor vehicle drivers in sovkhozes and kolkhozes.

Workers and employees dispatched to perform farm work at kolkhozes, sovkhozes and other State agricultural enterprises work and enjoy days off in accordance with the work and free time schedule established at the corresponding enterprises (kolkhozes, sovkhozes, etc.). In connection with the production schedule requirements here, an aggregate work time credit may be established, and the work performed on days off and holidays.

In connection with this, the dispatched workers may accumulate an excess of work time above the norm during the period of working at these farms. All accounts credited and compensation for work in excess of normal working time and for work on days off and holidays are settled by the farm enterprises for which the work was performed by procedures established by legislation.

If by the end of the dispatch work period no compensatory time off had been received for work performed in excess of work time norms (calculated as one day off for each 7 hours of overtime) and for work on days off (day for day), the enterprises must pay the dispatched workers for work performed in excess of work time norms as overtime work on the basis of an aggregate account of total work time, and as double time work for work on days off or holidays, i.e., to pay them one extra daily wage for each such day, above what they were paid by the kolkhoz or sovkhoz for work on these days. (For more details on guarantees and compensation to workers traveling to do agricultural work, see explanations by the USSR State Committee for Labor and Social Problems and the All-Union Central Council of Trade Unions Secretariat of 15 June 1984, No. 184/11-51, which can be seen at the prime place of employment and at the destination farm enterprises).

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## FORESTRY AND TIMBER

### RSFSR FORESTRY MINISTER DISCUSSES TIMBER RESOURCES

Moscow IZVESTIYA in Russian 23 Jul 84 p 3

Interview with N.M. Prilepo, minister of the forestry industry for the RSFSR by G. Aynulin; date and place not specified/

Text/ N.M. Prilepo has been assigned to serve as the Minister of the Forestry Industry for the RSFSR. Nikkolay Mikhaylovich Prilepo is 56 years of age and a graduate of the Leningrad Forest-Technical Academy imeni S.M. Kirov. He began his labor path as a forest builder and he served as Minister of the Forestry Industry for the Karelian ASSR. Over the past few years, he served as the deputy chairman of the USSR State Committee for Forestry.

Question/ When one discusses the forests of Russia, it is almost impossible to avoid use of the word "immense." What proportion do they represent of the country's forestry fund, Nikolay Mikhaylovich?

Answer/ More than 95 percent. Our forests are known both for their quantity and quality. We have valuable stands of pine trees. Then there are also our spruce trees, without which it would be impossible to publish one newspaper today. Newsprint paper is obtained only from the wood of spruce trees. The Russian forests are rich in cedar trees. Or let us take the linden trees. They provide honey and outstanding wood. Recently I signed an order calling for an expansion in the plantations of this strain and also for improvements in harvesting its seed. The nursery economy will be further developed. This will make it possible to satisfy more completely the requirements of industry and it will increase the zone in which the honey is gathered. Beech, walnut, chestnut and ash trees -- all are found in our Russian forests.

Question/ How much wood is being supplied in order to satisfy the national economic needs? Are the norms for the felling of trees being observed in the process?

Answer/ Approximately 2 million hectares of timber are being cut down annually. Four hundred million cubic meters of wood are being procured throughout the country as a whole. The RSFSR accounts for almost 360 million. The republic's scientifically sound norm for tree fellings -- 650 million cubic meters. But this is not meant to imply that our resources are inexhaustible.

In the central portion of the country, right up until the present time, a tense situation continues with regard to timber procurements. We are allocating fewer and fewer tracts for tree felling purposes. Meanwhile, vast tracts of timber remain untouched in Siberia. And the timber there is fine. It is hoped that BAM /Baykal-Amur Trunk Line/ will aid in accelerating the introduction of these territories into economic use. The initial timber procurement enterprises have already started appearing there. This will be of assistance in reducing the "workload" being borne by the forests in the European part of the country.

/Question/ Nikolay Mikhaylovich, will you succeed in restoring the forest on a timely basis. Are the tree cutters surpassing your efforts in this regard?

/Answer/ Today we have the required balance: the forest is being restored to the same extent that it is being cut down. Each year we plant young stock on 600,000-700,000 hectares. The remaining portion is restored, as the saying goes, by the forces of nature. In the forest there is much viable seedling growth. It merely requires the creation of the necessary conditions. And after 30-40 years have elapsed -- this growth will have been transformed into genuine trees. Concerned for the future of our spruce strains, we began planting special plantations. Here the spruce trees will be grown using an accelerated method. Modern scientific achievements are making it possible to cut in half the amount of time required for their ripening. It is our belief that this progressive method will make it possible to supply the pulp and paper industry with the needed raw materials in a reliable manner. We are providing special protection for aspen trees. At one time, this tree was considered to be nothing more than a weed. But, as is well known, match factories use only aspen wood. Today the situation is such that aspen wood must be brought in to the central regions from Kirov Oblast. This explains the decision that has been handed down: aspen plantations must be planted in the vicinity of the match factories. We will create aspen and poplar varieties which will grow for 10-15 years.

/Question/ The summer is at its peak, Nikolay Mikhaylovich. Is this not a very alarming period for you foresters?

/Answer/ Yes, it is a very uneasy time. We must constantly be on the alert. The state is expending large resources for the purpose of protecting the forests. We have been provided with aircraft and helicopters and we have at our disposal an entire army of fire-fighting paratroopers. We patrol the entire territory from the air twice a day. Our fire-fighters are often called upon to risk their lives fighting fires. Unfortunately, there are those who conduct themselves in a very careless manner in the forest. They leave their camp fires burning. At times they discard lit cigarette butts and thereafter are not even able to save themselves: during the summer, cigarette butts act like detonators -- a fire flares up immediately. The law adopted by the USSR Supreme Soviet provides us with greater rights and we will utilize them in an active manner. We have assigned ourselves the task of ensuring that not one violator of this law goes unpunished.

/Question/ The forest furnishes berries, mushrooms and nuts. Do you plan to increase this harvest of the fruits of nature?

/Answer/ With each passing year, we are increasing the capabilities of our departments for processing the gifts of the forest. We regret greatly the fact

that we are still producing only small quantities of these tasty products. We are expanding our nut trade zones and establishing new nut plantings. We are creating new cranberry plantations. And we have already accumulated positive experience in the mechanized tending and harvesting of this crop. We possess great potential in this area. All we have to do is to work better.

Question Nikolay Mikhaylovich, do you yourself often visit the forest?

Answer A forester is under an obligation to visit the forest. During temporary duty assignments, I necessarily go directly into the field to spend time with the personnel. It must be this way, since indeed these are our workers. If one does not meet with them from time to time, then he tends to lose awareness of their problems. Nor do I visit the forest in the sense that it is a servic obligation. For me it will always be a great joy to do so.

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## FORESTRY AND TIMBER

### BAM ZONE CONSTRUCTION, TIMBER ENTERPRISES NEED DEVELOPING

Moscow LESNAYA PROMYSHLENNOST' in Russian 12 Jul 84 p 2

[Article by R. Zaboyev, chief of Bratsklesstroy [Bratsk Timber Industry Construction] Trust, Irkutsk Oblast: "It's Time to Make the Main Line Habitable"]

[Text] Not so long ago the builders of the Baikal-Amur Main Line advanced an important initiative, to start through train traffic a year ahead of schedule. The patriotic step by the BAM builders was approved by the CPSU Central Committee. Clearly the ahead-of-schedule start of train traffic on the main line will promote the accelerated development of the production capacities of Eastern Siberia and the Far East and the involvement of major timber and other natural resources in the national economic cycle.

So, the time has come to obtain a return from the State investment in the construction of the road. In the Irkutsk segment alone, the timber still practically excluded from the national economic cycle occupies about 6 million hectares. And this is over 200 million cubic meters. But are the timber enterprises ready to exploit these resources?

The western segment of the BAM line stretches from the banks of the Lena River to the northern end of Lake Baikal; this 300 kilometer segment of road was commissioned for continuous use as long as five years ago. Incalculable timber resources stretch to the right and left of the railroad. For a beginning it was planned to build the large Kazachinsko-Lenskiy timber industry enterprise here, with an annual output of 500,000 cubic meters. It was planned to process a part of the raw material on the spot, producing 173,000 cubic meters of lumber and 77,000 cubic meters of industrial wood chips. It was planned to subsequently organize several additional large timber cutting and lumber and wood processing enterprises here.

Specialists of Giprolestrans [State Institute for the Design of Timber-Rafting Enterprises and Timber Transport Routes] and other design organizations have developed the engineering and economic studies for the construction of the Tirsks, Ust'-Kutskiy and Tayursk timber industry enterprises. Their total design output exceeds 3 million cubic meters per year. Plans for future enterprises include saw-mills and tie-sawing shops, a full set of cultural and domestic facilities and auxiliary enterprises. Carrying out these projects in the western segment of the BAM requires the capital investment of over 400 million rubles.

Unfortunately at the present time, only the first start-up facility of the Kazachinsko-Lenskiy timber industry enterprise with an output capacity of 150,000 cubic meters of wood products has been commissioned. But even this was started up with a sizable lag behind schedule: the builders are not ready to carry out large-scale projects.

Several years ago our Bratsklesstroy Trust managed with great difficulties to organize a mobile mechanized contingent in the settlement Magistral'nyy, with about 300 workers. Today it is able to perform work in the amount of 3 million rubles annually, however, as far as construction and installation work is concerned, in this region we have only one client enterprise, the Kazachinsko-Lenskiy timber industry enterprise. This enterprise is on the list of the most important projects of Minlesbumprom SSSR [USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry] for the current five-year plan. Its estimated cost is 50 million rubles but only 14 million have been spent so far.

The trouble is that we lack our own construction base. At one time the Irkutsklesstroy [Irkutsk Timber Industry Construction] Trust operated here; then the facilities were transferred to us. Understandably, first we had to take care of our own base and housing for the workers. But the construction orders had already been issued, and only projects due to be commissioned were being financed. We began building our base only in April of this year. With its start-up we will be able to raise the volume of construction and installation work to 4.5 million rubles per year. Of course, we are not stopping construction of housing, cultural and domestic, and production facilities. We have begun building the substructure warehouse: the profile service drawing has been completed for the LO-15S cross-cutting line and for the boiler room. However, recently we had to stop all work here. The ministry instructed Soyuzlesstroy [All-Union Design Institute for the Timber Industry] and Irkutsklesprom [Irkutsk Timber Industry Enterprise Design Institute] to study a plan to shift this enterprise to the production of logs for the Bratsk LPK [Timber Industry Combine]. If this version is adopted, the need for the substructure warehouse, cross-cutting shop and many engineering

facilities which we had already begun building, ceases to exist. But then we will have to build our own base in a cut down, so to speak, version. So far there is no decision, and what we are to do is not known.

And such confusion arises, in my view, because neither the Irkutsklesprom nor the capital construction administration of the ministry has a clear long-term program for development of the timber resources of the BAM zone. No one knows who is to build the Tirsks, Ust'-Kutskiy and Tayursk timber industry enterprises and several other enterprises as well. Their largest client--Irkutsklesprom had high hopes for a long time that subdivisions of the USSR Ministry of Transport Construction would take on the building of forest settlements in the BAM zone. As if they would not find other things to do after through train traffic starts on the main line. But the transport construction people have enough worries. They are faced with laying a second steel track, sidings, rail heads, stations and yards. So most likely we will be the ones to have to develop the BAM taiga before others do. And that is why we have to start thinking today how to do it best.

There are many reserves. Let us say that now much in time, effort and resources is spent on building housing for the workers and their families. At the same time, the time and labor consumed could be cut to a minimum. To do this, delivery of container-type prefabricated panel housing to our underbuilt regions should be organized. There already are about 15 such little houses in Magistral'nyy. It takes little time to assemble them. An entire street could be built in a few days. In addition, the houses are designed for a temperature of -50 degrees, and this is of no little importance in northern climes. And the quality of the finish of such housing satisfies everyone. One bad thing--very few container houses are delivered to us. These days, for example, orders have been approved for 25 sets, but at least 175 are needed.

And even those allocated are not so easy to get. The problem is that they are produced by the Vyatskiye Polyany Production Association in Kirov Oblast. The railroad people have noted that it is simply impractical to ship wooden parts over distances of several thousand kilometers. So both we, the consumers, and the suppliers have to engage in prolonged negotiations in order to receive permits to ship housing to the BAM zone.

Of course, the Ministry of Railways representatives are right in their own way. It would be time to organize the manufacture of such housing in Siberian areas, in Irkutsk Oblast itself. There is sufficient demand for them here, and the transportation expenses would be noticeably reduced.

Another question is what to do about the construction base. We had raised this in the early 1970's, when we began building the

Ust'-Ilimsk Timber Industry Complex. But in those days primary funding was allocated to a special administration of the Bratsk Hydroelectric Power Station Construction Trust of the USSR Ministry of Power and Electrification. With these funds the administration erected a huge construction industry base, where now hundreds of thousands of cubic meters of precast reinforced concrete are produced. This is just what we have a shortage of now; the yearly requirements of the trust in concrete structural members is 13,500 cubic meters, but the Bratskgesstroy allots us only 900 cubic meters. The rest has to be "found"...

A part of the reinforced concrete, for example, we bring in from Baykal'sk, where there is a plant with an output of 30,000 cubic meters. But from the southern shores of Lake Baikal to that same Magistral'skiy settlement is still more than a thousand kilometers. And again we are in a conflict with the railroad people, who feel that such shipments create a freight counterflow. Indeed, why ship panels and girders a thousand versts when right next door, in Bratsk, there is a large combine making reinforced concrete products?

But there is another, more reliable in our view, way to provide for the needs of builders in the forest. It is necessary to build our own reinforced concrete products plant with an output of 40,000 cubic meters per year. We could build this within the resources of the Bratsklesstroy Trust, on a cooperative basis with the recently organized repair and construction trust of the Bratsk LPK [timber industry complex]. Such an arrangement already exists, we only need support of the ministry and the appropriate assistance from the designers. Then the pulp mill workers could confidently tackle the reconstruction of the shops and plants of the LPK, and we could go on the attack in the BAM taiga.

We are also in great need now of a shop for the production of arbolite. In the second half of last year this issue was discussed at a special session at the USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry. At that same time a plan appeared for steps to produce 80,000 square meters of arbolite housing in the Siblesstroy [Siberian Timber Industry Construction] Administration. It was planned to produce 20,000 square meters of the 80,000 in Bratsk, in the unused space of an operating metal structures shop. It remained to issue specific instructions to a design institute to prepare technical documentation for the new shop. But this is precisely what was not done. And the Giprolesttrans is ignoring our requests...

Road construction in the North also requires great attention today. Even ten years ago we were building 100 kilometers of roads annually, but last year, only 67. And this is no coincidence. In 1976 the trust had 230 dump trucks, but today we have only 146. There were 55 excavators, and now--31. And the same goes for all

machinery and equipment. And the roads themselves that we build often fall short of today's requirements. At times our brigades have occasion to work next to the road builders of that same Bratskgesstroy. And what do they see? Their colleagues are working major quarries, pouring the road bed of crushed rock and gravel, then they compact it, and at times even surface it in concrete and asphalt. And we lay a road bed of so-called side reserves. They say that this makes construction cheaper. But is that so? At the Ust'-Ilimsk LPK, for example, several 30-40 kilometer logging main roads were built with an asphalt surface. They immediately started to haul timber here not with the heavy KrAZ's [Kremenchug Motor Vehicle Plant], but with the high-speed KamAZ's [Kama Motor Vehicle Plant]. As the result the plan for log hauling is being exceeded. And here the roads themselves will serve reliably for many years. It would seem that precisely such an approach to this matter must win out.

A cardinal solution to the enumerated problems is all the more necessary since they deal with regions which we will sooner or later still have to develop. And efforts should be made to keep costs as low as possible in doing this. We have become convinced from our own experience that without a precise, thoroughly developed long-term program, it would be difficult to exploit the timber resources of the BAM zone. Therefore it must be implemented without dawdling. And we, the builders in the forest, are prepared to make our most feasible contribution to this cause.

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